

# HARVARD MEDICAL

ALUMNI BULLETIN

SUMMER 1984



## “Primary care at Harvard?”

That’s a contradiction in terms.” Ten years ago, that and other less flattering comments about my judgment echoed skepticism that still lurked in my own mind: I had decided to return to HMS to direct the fledgling Primary Care Program....

*Story by Robert Lawrence on page 18.*



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# HARVARD MEDICAL

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*Cover photograph by Jerry Berndt*

# INSIDE H.M.A.B.

In 1919 Lord Dawson of Penn first used the term "primary care" in a report to the British government on the organization of health services. Fifty years later, I used the term as a senior resident to describe my career goals to Alfred Kranes '30, who looked puzzled until I defined it. "Oh," he said, "what we used to call the practice of medicine."

This issue explores the many faces of primary care at HMS and beyond. From first-year students who took Andy Billing's '74 course to Harvard's guru of primary care, John Stoeckle '47, the contributors reflect a personal commitment to the challenges of the field within the academic medical center, and to their involvement in the primary care movement.

Like the rest of American medicine, that movement is bending to the winds of change unforeseen a decade ago. Not since its origins during the Great Depression have so many questions been raised about public responsibility for the care of everyone in our society. During the 1960s the enfranchisement of the indigent and the elderly by Medicare and Medicaid, and the spawning of the neighborhood health center by the Office of Economic Opportunity, reflected the Great Society commitment to equity in health care. But medicine at that time was ill-equipped to respond to the demands created by these new programs. Ten years ago the national percentage of primary care practitioners had declined to an all-time low of 23 percent of all licensed physicians.

The Millis Report in the late 60's called for more generalists and for greater emphasis on ambulatory training; the American Board of Family Medicine was established in 1969; residency programs in family medicine have increased from fewer than a dozen in 1969 to over 350; state schools and a few private schools have instituted departments of family medicine; outpatient departments have been reorganized as group practices; third parties are financing the treatment provided by these practices; and, for the first time, residency training outside the hospital in the primary care disciplines of family medicine, pediatrics, and internal medicine has been directly financed. With the passage of the Federal Health Professions Educational Assistance Act in 1976, a large infusion of public funds administered by the Bureau of Health Manpower of the Department of Health Education and Welfare has stimulated dramatic growth in the number of residencies offering ambulatory training.

As the high water mark of this support passes, the lasting impact of primary care at Harvard will be tested. The pieces in this issue reveal a vigor and diversity which bode well for the future.

Also noteworthy in this issue is the tribute to John Merrill, a former *Bulletin* editor and distinguished member of the Harvard community, by his longtime friend and associate Joseph Murray, the outgoing president of the Harvard Alumni Association.

—Robert S. Lawrence

# HARVARD MEDICAL ALUMNI BULLETIN

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## A Whole Debate

James Gordon's article on holistic medicine (Fall/Winter 1983) exemplifies a type of thinking that seems to be enjoying a revival in some areas of medicine. William James described it in speaking of a time when "Truth was what had not yet been contradicted, most things were taken into the mind from the point of view of their human suggestiveness, and the attention confined itself exclusively to the aesthetic and dramatic aspects of events."

Gordon's language is the rhetoric of fiction: the venture into the unknown, the lonely pioneer, the voyage of discovery, the confounding of the wise, the hopeless prospect, the crisis of faith, and the skeptic convinced. Just to list these dramatic themes excites interest; woven into a factual narrative they greatly increase the reader's interest and response. But this sort of "docu-drama" evades proving that the events described were causally related or had in reality the significance assigned to them in the story. The conscientious reader looks in vain for factual details and critical analysis. What were the objective clinical and radiologic findings? What was the basis of the osteopath's diagnosis? What were the mouth sores? What caused the fever? Gordon is not interested. His attention is all on the aesthetic and dramatic aspects of events.

The paradigm of Gordon's reasoning is the hypothesis of Walter Shandy, in Sterne's *The Life and Opinions of Tristram Shandy, Gentleman*. The Shandean hypothesis accepts support from any instance, however specious; from any argument, however flimsy; and from any association, however tenuous. In Sterne's words, "it assimilates every thing to itself, as proper nourishment; and,

from the first moment of your begetting it, it generally grows the stronger by every thing you see, hear, read, or understand."

Indeed, little active support seems needed. Gordon simply launches an idea, perhaps obliquely, and then leaves it floating quietly while he goes on to something else. Thereafter an occasional allusion to the original idea suffices to carry it gently forward, from conceivable through possible, plausible, and probable, to unquestioned. Nothing more than the appeal of the exotic, for example, seems required to sustain a lively faith that the solutions to presently intractable medical problems are preserved in the ancient lore of cultures where the actual conditions of health are appalling, and where the application of the simplest principles of Western medicine—principles not buried in some occult art, but rather accessible to any practical person—could overnight cut the mortality rate in half and vastly improve the quality of life.

Are Gordon's therapeutic methods effective? The most sympathetic reader will find little or no substantiation in his article, and little reassurance that substantiation exists elsewhere. Surely it would have been a simple matter for Gordon to acquaint us with his careful, critical, and systematic studies on diet and acupuncture in asthma, assuming that those studies exist. Instead he has chosen to offer only a single selected case history, and that presented dramatically rather than critically. This choice has no logical defense. A lay audience might be confused or bored by scientific details, but the readership of the *Bulletin* is not a lay audience, and there is no excuse for not coming out with the facts. If these methods work,

why has Gordon not used this opportunity to present the proof? Why has he instead filled six pages with irrelevant and diversionary chatter?

Gordon does not even state clearly what he is claiming. At the outset, he adumbrates the prospect of treating "hypertension, diabetes, obesity, cancer, depression, and alcoholism." Eventually it becomes apparent that he has nothing to offer that remotely approaches the efficacy of insulin, antihypertensives, and cancer treatments, which he implicitly disparages as "unable to stem the tide." Trying to ride the wave of popular enthusiasm for anything "environmental," he suggests that infectious disease (which medicine can cure) lies outside the category of "environmentally related illnesses" (which it can't). What, if not "environmental," are the common measures against infectious disease: water and sewage treatment plants, aseptic surgical technique, immunizations, and, for that matter, the draining of the Pontine marshes under the early Roman emperors?

Faith in Gordon's objectivity is further undermined by his tendentious use of terms like "nontoxic remedies," "[spinal] adjustment," "healers," and "allopathic medicine" (this last being Hahnemann's attempt 150 years ago to portray medicine as just another unfounded doctrine like his own homeopathy). Even Gordon's sincerity is put in doubt by his incredulity toward the most outlandish claims of his irregular associates, an incredulity that evaporates long before the job of critical analysis is even begun, and seems designed mainly to preempt, defuse, and divert the reader's own skepticism.

The issue raised by Gordon's article is not the unorthodoxy of his views but the puerility of his reason-

ing. Really, his medicine seems not so much holistic as half-asttic. It is very commendable to be receptive to unusual ideas; but at some point an element of critical thinking is needed to determine whether what is conceivable and interesting is really probable or even plausible. More than 2,000 years ago Homer recounted the myth of Proteus, the god who changed his shape at will but, if held fast, could be compelled to tell the truth. Yet here is Gordon trying to extract truth from a protean clinical experience without defining symptoms, diagnoses, treatment methods, or criteria of success.

At least since the time of Aristotle, Western thought about the nature of the real world has valued above all not harmony, not balance, not conformity to purpose or destiny, but the apodictic quality of reasoning itself, its character of necessity, of compelling assent. Yet here sits Gordon, like a child on the beach, erecting elaborate and grandiose sandcastles of ifs and perhapses.

The editor is certainly to be commended for placing Gordon's article before the alumni. When the product of a Harvard medical education adopts, as a mode of reasoning, a collection of hoary follies, fallacies, and rhetorical artifices, and imagines himself to be thereby pioneering new, imaginative and promising ways of thinking, there would seem to be reason to wonder whether something has gone wrong in the educational process, something that ought to draw the attention of alumni.

The difficulty is that it must be a question of values, not knowledge. Why would someone choose a line of reasoning that is not cogent? Only, it seems to me, if he regards his arguments not as the foundation of belief but as a means of reinforcing and propagating beliefs arrived at on other grounds (e.g. religious, ideological, political). If someone holds one of these latter values more dear than scientific truth, and if the faculty is unable to dissuade him, then what can HMS do? Withhold his degree?

It would appear that the long struggle to establish the value and validity of scientific thinking is not entirely a matter of history, and that "sciences as one would" are in some quarters as vigorous as ever.

—C. Dennis Thron '59

*James Gordon replies:* "Curiouser and curiouser," I thought as I read Dr. Thron's letter. He attacks me for not having done what I never intended to do and ignores, misinterprets, and misunderstands virtually all that I did write.

Elsewhere—for example, in articles in the June 1982 *Western Journal of Medicine*, the March 1981 *Journal of Clinical Psychiatry*, and in two books I coedited, *Health for the Whole Person* (Bantam 1981) and *Mind, Body and Health* (Human Sciences Press 1984)—I have written carefully footnoted papers on the paradigm of holistic medicine, the details of its elaboration, and its strengths and weaknesses.

In the *HMAB* piece I was speaking informally—indeed I was asked to make an earlier draft more personal—to colleagues and friends. I wanted to tell my readers a little about holistic medicine and my evolving interest in it; to give a feeling—not radiographic or bibliographic evidence—for its effect on me and my practice; to suggest that the approach it embodies may be enlivening and fruitful for all physicians.

There is some, indeed a growing body, of carefully accumulated evidence, as well as a very long history of empirical experience to support the use of the techniques I mention, particularly in the treatment of the kinds of chronic illness that afflict Americans. For example, I was initially attracted to the use of acupuncture in the treatment of asthma by a report in *The Peking Review* on a paper titled "Observation of the Efficacy of Subcutaneous Acupuncture in Treating 121 Cases of Bronchial Asthma," which appeared in the *Chinese Journal of Internal Medicine* in January 1965. Later, in the course of my own training in acupuncture, I watched my teacher successfully treat acute asthma attacks, and, over a period of time, the chronic condition. I too began successfully to treat asthma patients—about 20 as of this writing—like the one I describe in the article.

More recently, I have seen physiological studies which support the improvement my patients and I have observed clinically. One such controlled study by Takishima et al. in the January 1982 *Annals of Allergy* ("The Bronodilatory Effect of Acupuncture in Patients with Acute Asthma"), for

instance, revealed a significant decrease in total respiratory resistance as well as clinical relief from acute attacks.

The use of acupuncture in the treatment of asthma is, however, far less well documented than other aspects of the holistic approach. For example, the effects of intra-psychic and interpersonal stress on the onset and course of a variety of chronic illnesses have been well studied. In my article I mentioned Minuchin's work on the "relationship between the free fatty acid levels of diabetic children and their parents' interactions," though I could equally well have discussed his work on asthmatic and anorexic children, which is summarized in his book *Psychosomatic Families* (Harvard University Press, 1978).

Even more impressive is the extensive literature on the therapeutic use of a variety of techniques including relaxation therapies, yoga, diet, and acupuncture, in the treatment of our major chronic illness, hypertension. There are dozens of citations in these areas in each of the recent volumes of the *Index Medicus*. Benson's work, as summarized in *The Relaxation Response* (William Morrow 1975) and the *Mind/Body Effect* (Simon and Schuster, 1979), and Ornish et al.'s paper on "The Effect of Stress Management Training and Dietary Changes in Treating Ischemic Heart Disease" (*JAMA*, 7 January 1982) make the point well and are easily available.

In my article I did not, as Thron suggests, turn my back on science or its methods or on Western medicine. I said that the techniques I and thousands of other physicians were rediscovering "cry out for careful and sophisticated research," precisely the kind of controlled studies of which Thron is so desirous.

I also suggested—and believe strongly—that we must develop new methodologies to study some of the subtler, less well understood aspects of health care touched on in my article: the synergistic interaction of different treatments; the effect of the patient's attitude on the onset of and recovery from illness; the therapeutic power inherent in mobilizing the patient as an active partner in health care; and the way that interactions between physician and patient—which we have subsumed under

the term "placebo"—produce a positive (or negative) therapeutic response.

This is probably not the place for prolonged philosophic debate and historical discussion, certainly not the place for me to systematically dismantle the rhetorical missiles Thron has launched in my direction. Still, I would like to remind him that both the domain of reason and the conclusions to which reasonable people are "compelled" change with time, culture, and the predispositions of the observer, as well as with advances made in particular disciplines. What is "apodictic" ("clearly demonstrable"—I learned when I turned to the *Oxford English Dictionary*) to one person may seem inaccurate or inadequate to another who is able to put the phenomena in a different or larger context.

For example, modern physics has provided us with principles of "relativity," "uncertainty," and "complementarity"—which challenge our ordinary notions of cause and effect even as they help reveal and explain subatomic phenomena of which we had been unaware. It is not unreasonable to wonder if the concepts Thron derides—"balance," "conformity to purpose," and a whole harmoniously integrated organism which is greater than the sum of its parts—might not similarly broaden and deepen our understanding of biological phenomena and the therapeutic process. Just as we now know that Newtonian physics applies only to one part of the spectrum of physical events, so it may turn out that Cartesian logic, which has helped produce so many advances in medicine, is of limited applicability.

Finally, I would like to challenge the unpleasant, overbearing tone—indeed, the name-calling—Thron has adopted. Angry, defensive attempts to protect one's own position or the orthodoxy to which one owes one's allegiance, or to demolish those with whom one disagrees, subvert the mutually respectful and open exchange of ideas which must be the basis for both scientific advances and a humanistic approach to medicine.

In this connection I will quote the last lines of my article:

I imagine the name 'holistic medicine' will eventually be dropped, as it is ultimately a device of historical utility, not a necessity. Holistic medicine is not a new

specialty. The name serves as a reminder of what is best and most enduring in medicine, and an opening into a new synthesis of contemporary biomedicine and the larger healing tradition of which it is but a part.

It is a way of approaching all health care, as useful and exciting for the surgeon and psychiatrist as for the family practitioner, as vital to practice in a tertiary care setting as in a rural retreat. It is, finally, an attitude of thoughtful openness to everything that may be useful in health care—to the healing techniques we may have ignored or disparaged, as well as those we learned in medical school and specialty training, to the healing power of the therapeutic encounter, to our patients' capacity to understand and care

for themselves, and our ability and need as physicians to grow and change. □

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*The editors welcome letters from readers, particularly in regard to articles published recently in the Harvard Medical Alumni Bulletin. Letters should be brief, double spaced, submitted in duplicate, and marked "for publication." Not all letters can be used; those accepted will become the property of the HMAB and may be edited, although we are unable to provide pre-publication proofs.*

## BOOK MARKS

# A Marriage to Medicine

*CHALLENGING MAN-MADE DISEASE. THE MEMOIRS OF HARRIET L. HARDY, M.D. Praeger Publishers, New York, 1983.*

by Gordon Scannell

There is gentle and, I am told, unintended irony in the title of Harriet Hardy's memoirs, *Challenging Man-Made Disease*. The book is a direct and sprightly account by a courageous individual, quite without pretense—the very embodiment of that colonial motto, "don't tread on me."

The book should achieve her goal of stimulating women (and men) to study and *practice* medicine. Many of us who worked with Harriet at the height of her highly visible career in industrial medicine tend to forget, or perhaps never knew, her earlier career as a doctor to students at Northfield School and later at Radcliffe; her days of riding the bus during a rotating internship at the Philadelphia General; and her three years of private practice in Northfield, Massachusetts, which she describes with

brilliant flashes of humor. Indeed, she threw herself so intensely into practice in Northfield that she succumbed for a while to overwork. She writes candidly of her depressions and convincingly of her marriage to medicine.

After Radcliffe and Harvard, Harriet came to Massachusetts General Hospital and then to MIT, where she formed a lifelong commitment to its Occupational Medical Service. The depletion of staff during World War II forced MGH to look outward for help. A gallant band of women, including Harriet Hardy, Helen Pittman, Marion Ropes, Janet MacArthur, and Ann Forbes, came to its aid. Not long afterward, Rita Kelley, a Cornell graduate, as was Harriet, became chief medical resident at the hospital, the first woman to be given this rank.

In the mid-1940s, at the suggestion of Joseph Aub, Hardy became involved with the Division of Occupational Hygiene in the Massachusetts Department of Labor. Here she began a brilliant career that took her to MIT and the beryllium story. Beryl-

lium led her from Salem to Los Alamos and the AEC, to international conferences, and then to the broad field of investigation of occupational disease. The tale goes from asbestos to cadmium, to benzol, to lead, and even to coal with the miners in Wales, South Africa, and Pennsylvania.

Harriet tells her story with a lively sense of narrative, a nice balance of anecdote and personal reminiscence. She frequently mentions Alice Hamilton, one of medicine's great people, whose autobiography, *Exploring the Dangerous Trades*, now finds a worthy sequel. Hamilton, a friend of social reformer and Nobel laureate Jane Addams, was clearly central to Harriet's career, inviting her to become a junior author in her major work on *Industrial Toxicology*. She also supported Harriet in the protection of workers' health against unreasonable and hazardous demands of industry—not universal, of course, but always a present danger.

Alice Hamilton was the first woman to receive a faculty appointment at Harvard. She lived to be 103, in full control of her mental faculties. Harriet has quite a way to go, but in spite of having a brain tumor removed 10 years ago and the occasional broken hip, she bids fair to emulate her beloved model.

The autobiography closes on a characteristic note. "I feel there is no such physician as a man physician or a woman physician—there are only poor physicians and good physicians. If I was regarded poorly by men students, faculty, or colleagues in my years of medical training or practicing, I was blissfully unaware of it. I wish for my sisters in medicine the rewards that have been mine." □

# PULSE

## Second-Year Spectacle

A diabolical plot is afoot in the Class of 1986's second-year show, "The Right Stiff." The dean plans to clone an HMS student to create the perfect medical school class. ("We have the technology," Genetics Department chair Phil Leder (John Ayanian) de-

clares.) To select the ideal prototype, the Admissions Committee—and the audience—follows four students through their first two years.

Along the way, we encounter Frannie Moore (Brian Shaffer), oblivious of the expiring patient (Mark

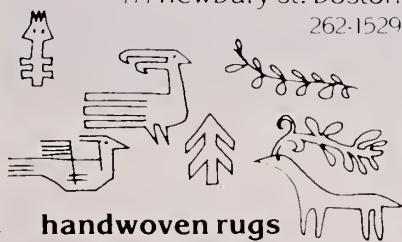


"Frannie Moore," resident, and patient

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Girard) presented to him by a resident (Uri Shabto); transvestite Frank Infarct (Jeff Lee) singing "White Count and Diff"; inquisitors torturing Gal-Elio (John Giella) for his heretical anatomical nomenclature (thoraxa, crotcha, foota), while monks chant "A-men, A-men-or-rhe-a"; a student (David Cohen) recalling why he transferred to HMS ("Hello Muddah, hello Faddah, I'm at med school in Gren-ada"); tuxedoed tapdancers; and more, including a videotaped "Candid Camera" takeoff in which Dean Federman plays himself . . . or is it Alan Funt? □



*Right: Finale  
Below: Gal-Elio and torturers*



*Above: Monks  
Left: Rehearsal*



## Alumni Council

Topics at the winter meeting of the Alumni Council included alumni-student relations, the Oliver Wendell Holmes Society, student financial aid, and the Faculty Committee on Educational Evaluation.

**Alumni-Student Relations.** Carl Brownsburger '55 reported on the Aesculapian Club's efforts to increase student-alumni contact. This year it has sponsored a reception and brunch, and last year members invited students to their homes for dinner. The club also supports the Oliver Wendell Holmes Library in Vanderbilt Hall and the Aesculapian Room in Countway Library, and contributes to the second-year show.

Suzanne Johannet '84 presented her plan for developing informal preceptorships in family practice, in which first- and second-year students may spend time learning from alumni. For more details, see her article in this issue.

The council appointed a committee to review programs that have been effective in improving alumni-student relations at other medical schools, and to report on those that might be helpful to HMS.

**Oliver Wendell Holmes Society.** Daniel Federman '53, dean for students and alumni, gave a progress report on the society, which in September 1985 will enroll 25 students from that year's entering class on a five-year New Pathway in medical education. (See the Alumni Council report in Pulse in the Fall/Winter 1983 issue.) At present, faculty curriculum design groups are setting up broad, interdisciplinary programs under the titles The Patient, The Doctor, Human Biology I-IV, Human Life Cycle, and Experience in Patient Care. Separate support committees are ironing out questions of faculty development, educational methods, information technology, and evaluation. The work is overseen by a coordinating committee made up of the chairs of the curriculum design groups, and a steering committee consisting of Dean Tosteson; Daniel Federman; S. James Adelstein '53, dean for academic programs; G. Octo Barnett '56, professor of medicine; Leon Eisenberg, Maude and Lillian Presley Professor of Social Medicine; M. Judah Folkman '57, Julia Dyckman

Andrus Professor of Pediatric Surgery; Edwin Furshpan, professor of neurobiology; Robert S. Lawrence '64, Charles S. Davidson Professor of Medicine; Herbert Virgin, a student in the M.D.-Ph.D. program; and Gordon Moore '63, director of the New Pathway.

**Student Financial Aid.** Federman reported that the cost of education at HMS is about average for private medical schools, but that HMS's student body is the neediest of the 13 consortium private medical schools. (See his article in the Winter 1983 *Bulletin*.) Low-interest federal loans have been unavailable for the past two years. Although HMS has a good scholarship program of about \$1 million per year, many students are forced to rely on high-interest loans, which impose a heavy financial burden. All unrestricted alumni giving, sometimes as much as \$750,000 per year, is designated for student aid.

**Faculty Committee on Educational Evaluation.** Gilbert Levinson '53, non-faculty member of the committee, began by reviewing its history. In the early 1970s, students started an informal rating of their instructors, then later organized a group to make a more formal report. Now a student-faculty committee chaired by Bernard Fields, professor of microbiology and molecular genetics, it comprises one student from each class, 13 faculty members, and five ex-officio members from the administration.

Recently, the committee has reviewed clerkships and Introduction to Clinical Medicine, and has made recommendations to the dean. Volume 5 of the *Student Course Evaluation* has been published; it assesses courses on the basis of organization, workload, quality of teaching aids, and accessibility of instructor. □

## Terms of Internment

At Match Day this year, 62 percent of HMS applicants obtained their first-choice residency, and an additional 19 percent received their second or third choice. Seventy members of the Class of '84 will remain in Massachusetts, 65 of them in Harvard-affiliated teaching hospitals. California proved the next most popular state, attracting 27 resi-

dents-to-be, while New York came in third with 18.

The following breakdown by specialty offers few surprises, though we note that 11 graduating students—up from four last year—have set their sights on ophthalmology.

Medicine	47
Surgery	19
Ophthalmology	11
Pediatrics	11
Anesthesia	9
Diagnostic Radiology	9
Orthopedics	9
Primary Care	9
Family Practice	7
Neurology	6
Psychiatry	6
OB-GYN	5
Pathology	3
Dermatology	1
National Health Service Corps (Neurology)	1
Neurosurgery	1
Oral Surgery	1
Otolaryngology	1
Therapeutic Radiology	1
Transitional	1
Urology	1
Research	2
BU/Brandeis Health Policy Consortium	1
Doctoral Program in Health Policy	1
Fellowship (Ophthalmology)	1
Research (Ophthalmology)	1

**Raymond C. Alexandre**  
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Massachusetts General Hospital  
Surgery

**Donna R. Becker**  
Case Western Reserve University  
Hospitals, Cleveland  
OB-GYN

**Claude D. Belgrave Jr.**  
Roosevelt Hospital, New York City  
Preliminary Medicine  
New York Eye & Ear Infirmary  
Ophthalmology

**Daniel J. Berry**  
New England Deaconess Hospital  
Preliminary Surgery  
Massachusetts General Hospital  
Orthopedics

**Robert W. Betcher**  
Mt. Auburn Hospital  
Preliminary Medicine

McLean Hospital  
Psychiatry

**Amy L. Billett**  
University of Washington Affiliated  
Hospitals, Seattle  
Pediatrics

**Deborah L. Blacker**  
New England Deaconess Hospital  
Preliminary Medicine

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## Foreign Affairs

by Kevin Devey '85



I had been a typical HMS applicant, having graduated near the top of my class in college, done research and volunteer work, published a paper, held important offices, used my summers constructively, and all the other "suggested, but not required" premed activities. Because of this typicality I was shocked, though elated, when I was accepted into the HMS Class of 1984. In a school whose admission committee strives to search out and choose the out-of-the-ordinary student, my application seemed comparatively bland.

Arriving in Boston the following fall, I was struck by the diversity of my peers. I was one of the younger members of my class, which baffled me at first. After all, I hadn't skipped any years or been a childhood prodigy. Then I realized that a majority of students had taken time off from their education. I began to seriously con-

sider doing the same, and began collecting information about every overseas opportunity I could find.

Despite my initial enthusiasm, certain inevitable roadblocks dampened my spirits. Like money. How could I afford to travel when I had to work several part-time jobs in Boston just to make ends meet? I scanned the information board in the Student Affairs office for paying fellowships and other stipend-supported opportunities, but again was disappointed. This one required fluency in French; that one required previous travel experience; that one required you to be a descendant of the Class of 1901, a resident of Obeewankanobee, Wisconsin, or the offspring of a Navajo Indian. Like the rich getting richer, it seemed only the culturally enriched could become more so.

As the demands of second and third years increased, I found myself

caught up in the rat-race of choosing the "right" clerkships, meeting the "right" people, deciding what specialty to enter, finding an internship adviser. Before I knew it I'd be a resident, a fellow, an Attending, perhaps hold an administrative office, and then retire. So straightforward. But so boring.

During the spring of my third year, unenthused about starting the residency application process, fed up with picking up a newspaper and not knowing anything about world affairs, impressed with Dean Tosteson's fears that HMS students were becoming too mainstream and unworldly without liberal educations, and convinced the timing was right, I decided to take a trip around the world. For the next six months I wrote letters to alumni, friends of alumni, friends of friends, friends of faculty, *anyone* with an overseas address, in hopes of discovering opportunities for wandering medical students on "sabbatical." I contacted the Red Cross, the Albert Schweitzer Foundation, AMSA, refugee camp-staffing organizations, and many others in hopes of finding a way to work in exchange for financing part of my trip. Many people responded, but there were few paying opportunities.

But then it hit me: Calculating that I was going to owe \$60,000 in loans by the time I graduated from HMS, I realized I'd probably be in debt for the next 20 years. The cost of a trip would be inconsequential compared to the amount I owed already. So what if I was in debt for 21 years instead of 20? Again I went scrambling, this time for money, and was fortunate to find a former employer who was willing to loan me enough for the trip.

I had received letters from several



HMS alumni and friends of faculty inviting me to spend time with them and observe how medicine was practiced in Hong Kong, Bangkok, Chiang Mai, Beijing, Penang, New Delhi, Varanasi, Kathmandu, and Colombo. I thought these visits would provide a golden opportunity not only to see the medical aspects of these countries, but to meet the local people and get a better understanding of their cultures. The visits would also provide enough academic stimulation to keep me from forgetting everything I had learned in the first three years of medical school. I also liked the reassurance of knowing that someone was expecting me.

I went first to Hong Kong, where I visited John Boey '71, a general surgeon at Queen Mary's Hospital. Born in the U.S. of Chinese parents and educated at Princeton and HMS, Boey chose to retain his U.S. citizenship and practice in Hong Kong. He explained to me that citizens of the colony are concerned about 1997, the year China is slated to take over Hong Kong, which it had ceded to the British in a 99-year lease after the Opium Wars. Having migrated from China or descended from those who did, Hong Kong's citizens are well aware of the cruelties and hardships the unpredictable Communist leaders have inflicted. Few of them are eager

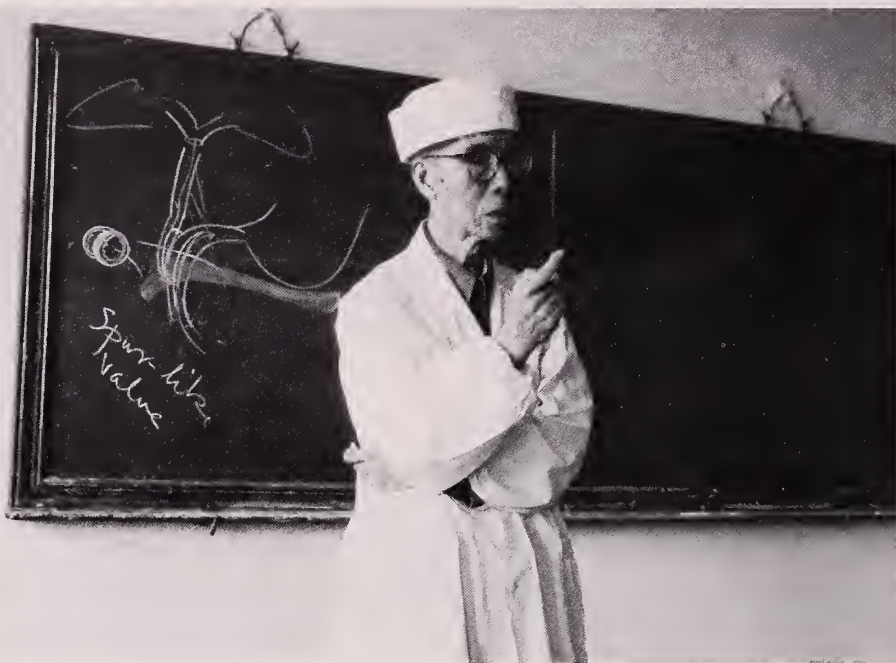
to give up their capitalistic, democratic lifestyle to "share the poverty, not wealth" of socialism.

Hong Kong physicians, Boey continued, are considering two options: retiring now and leaving before 1997, or leaving now to establish practices elsewhere. Boey has decided to stay on in Hong Kong since, as a U.S. citizen, he will be a "foreigner" under any regime and so able to leave at any time.

*In Hong Kong society, where sickness hinders one's ability to work and therefore feed oneself, and stoicism is a virtue, all patient complaints are taken quite seriously.*

During my stay in Hong Kong, I visited several wards and clinics with Boey and was able to observe some operations, including esophagectomy for cancer with a gastro-pharyngeal anastomosis (in which the stomach is moved into the thorax—try to figure out the physiology and pressure dynamics of that situation!), a comparatively rare operation in Western medicine. As many Hong Kong physicians are trained in the U.S., Britain, and Australia, I was not surprised that their medicine was similar to what I had witnessed in Boston. Yet there were certain distinct differences. An air of cooperation rather than territoriality prevailed. Boey, a "general" surgeon, performed virtually all surgical procedures except cardiac, orthopedic, plastic, and ophthalmologic cases. Nurses and physicians seemed to have a very productive relationship rather than a competitive one, which resulted in better patient care.

The biggest difference was the crowding. Many hospital wards were filled to twice their capacity, with portable cots occupying every square inch of available floor space. Clinics looked like cattle cars, with standing room only. Yet nosocomial infection rates were comparable to those in the West, although Boey pointed out that a controlled study comparing



the two would be impossible.

Patients differed from their American counterparts in more than the types and distribution of their medical problems. In Hong Kong society, where sickness hinders one's ability to work and therefore feed oneself, and stoicism is a virtue, all patient complaints are taken quite seriously. Quite a contrast to the U.S. where, due to mechanisms such as Workman's Compensation, one often wonders whether complaints are real. Brought up in an environment where crowding is the rule and privacy the exception, patients in Hong Kong were remarkably uninhibited and open during their interviews and physical exams, which sped up evaluation, diagnosis, and treatment.

After several pleasant days exploring the medical system with Boey, I turned my sights toward China. I had decided to go to China almost by accident. I had assumed that the ticket to this mysterious country was either to join an expensive tour or to be invited by the government. Having neither riches nor fame, I was delighted to find Brian Schwartz's book *China Off the Beaten Track*, which describes how individual travelers can obtain visas and wander around China at will. Immediately, I began reading books on Chinese history and sociology to prepare myself for the adventure.

Nothing I read could have adequately prepared me for my first day

in China. When I stepped off the boat in Shanghai, the fabled eastern gateway and largest city of the Middle Kingdom, I felt as if I had been thrown in a time warp. Everything, although new, looked surprisingly old. The cars, buses, and trucks reminded me of pictures I'd seen as a child in old issues of *Life* magazine. Merchants on street corners were using sewing machines that could have come from my grandparents' attic. Everyone who wasn't dressed in the drab, green uniform of the PLA (People's Liberation Army) was sporting clothes, glasses, and hairstyles that I had seen only in movies from the 1950s. Everywhere men, women, and children were carrying, dragging, or hauling immense loads.

I realized a huge crowd of people were staring at me, conscious of my every word and move. I nervously walked up to a taxi driver and asked, in English, to be taken to a local hotel. The huge crowd closed in on us. It was obvious that the driver hadn't understood a word I'd said. Fortunately, I'd brought a Chinese phrasebook, and the driver figured out what I wanted. People literally dove out of the way as the car weaved through the sea of bicycles and pedestrians.

My first few days in China were filled with excitement at being in such a mysterious country and frustration at realizing that traveling and coping in that country would not be

easy. Few people, except in tourist facilities, speak any English; all signs are in Chinese; and even *finding* a bus or train station, let alone buying a ticket, could take a full day.

As I began exploring the huge, bustling city of Shanghai, I was constantly aware that my fellow travelers and I were the center of everyone's attention. When we ate in local restaurants, people would press their noses on the window, trying to catch a glimpse of the foreigners eating. One day, as I waited for a rainstorm to pass, an old man asked me where I was from, using the English he had learned almost 50 years previously (and not used since) when he was a dockworker during the British occupation of Shanghai. In an instant, no less than 100 people crowded around to listen to our conversation and practice whatever little English, often self-taught, they knew. Standing on a curb under an umbrella and looking down on this horde, I must have looked like a preacher talking to the masses.

I made attempts to converse at every opportunity, even if it meant only saying "Hello," "How are you?," "Goodbye," and "Thank you." I was amazed how far a smile and an attempt at language could go. The Chinese people were supportive of all attempts to speak and amazingly tolerant of frequent mistakes and misunderstandings. As my vocabulary grew, travel in China soon became much more pleasant.

After stopping in Suzhou and Hangzhou (where I ran into Roger Wilson from MGH, who was as surprised to see me as I was to see him), I arrived in Beijing. Dr. Chen Qingtang, whom I had met in the U.S., met me at the station and took me to my own apartment on the grounds of the Beijing Children's Hospital (BCH), where I would be spending the next several weeks. Dirty and tired after my 24-hour train ride, I was embarrassed when what seemed like an endless number of physicians came to introduce themselves and welcome me, including Jiang Zai-feng, chief of pediatrics, Pan Shao-chuan, and Ye Zhen-zhen. I wondered if they realized I was only a medical student. They seemed as excited as I, explaining that it wasn't often that foreign medical students wandered into hospitals in Beijing.

During my stay there, I spent time

with general and pediatric surgeons and pediatricians at BCH, Chen Qingtang, a neurologist at Beijing Medical College, and Oe Qin-sheng, professor of obstetrics and gynecology at Capitol Hospital. Unfortunately for me, Dr. Qin-sheng's husband, Tseng Hsien-chio, chief of surgery at Capitol Hospital, was away, but he arranged for me to meet with several members of his house staff.

I was able to attend numerous inpatient wards and outpatient clinics, including acupuncture and traditional (herbal) medicine, as well as observe many surgical procedures—including open-heart surgery, a thyroidectomy under acupuncture anaesthesia, and a ring-clamp procedure for Hirschsprung's disease. There were numerous opportunities to talk with medical students, house officers, and house staff, and I attended many floor and grand rounds, which were always graciously translated for me.

BCH's outpatient clinic provided an example of how medicine is affected by government policy. Chinese authorities have devised the "one-child rule," which is enforced by "criticising" those couples who have two children, and imposing harsh financial penalties on those with three or more. But the Chinese have long regarded children as a form of pension, expecting that when they cannot work anymore their children will care for and support them. Thus, Chinese parents overreact each time their child looks even slightly ill. This parental anxiety, combined with the fact that medical care costs the patient almost nothing, results in 3,000 outpatient visits a day at BCH alone. Many physicians expressed the view that patients should be charged more for medical care to provide some incentive for preventive measures and reduce the enormous financial burden on the government.

What China's health-care system lacks in technology and sophistication it makes up for in determination and intelligence. Still, manpower is in short supply now as a result of the Cultural Revolution (1966-76), when schools were closed. Rural areas are still largely underserved; polio, tetanus, TB, and rheumatic fever are still seen; and IV tubes and bottles are reused.

The strides forward have been enormous, however. Since 1949, the Communist government has turned a



disorganized, poverty-stricken country into one with a stable, independent socialist economy, and has managed to feed, house, and clothe most of its citizens. The improvements in nutrition, sanitation, and control of infectious diseases have contributed to better health (and also to the population problem). Today, huge amounts of money are being spent to build new hospitals, decentralize health care, and educate more physicians and other health-care personnel. Advanced procedures like limb replacement and open-heart surgery, sophisticated research, and new technology are becoming more and more commonplace.

During my three months in China, I traveled about 12,000 miles, mostly by train, visiting the cities of Shanghai, Hangzhou, Suzhou, Beijing, Xi'an, Lanzhou, Xining, Dunhuang, Turpan, Urumqi, Chengdu, Emei, Leshan, Kunming, Shilin, Guilin, Yangshou, and Wuzhou.

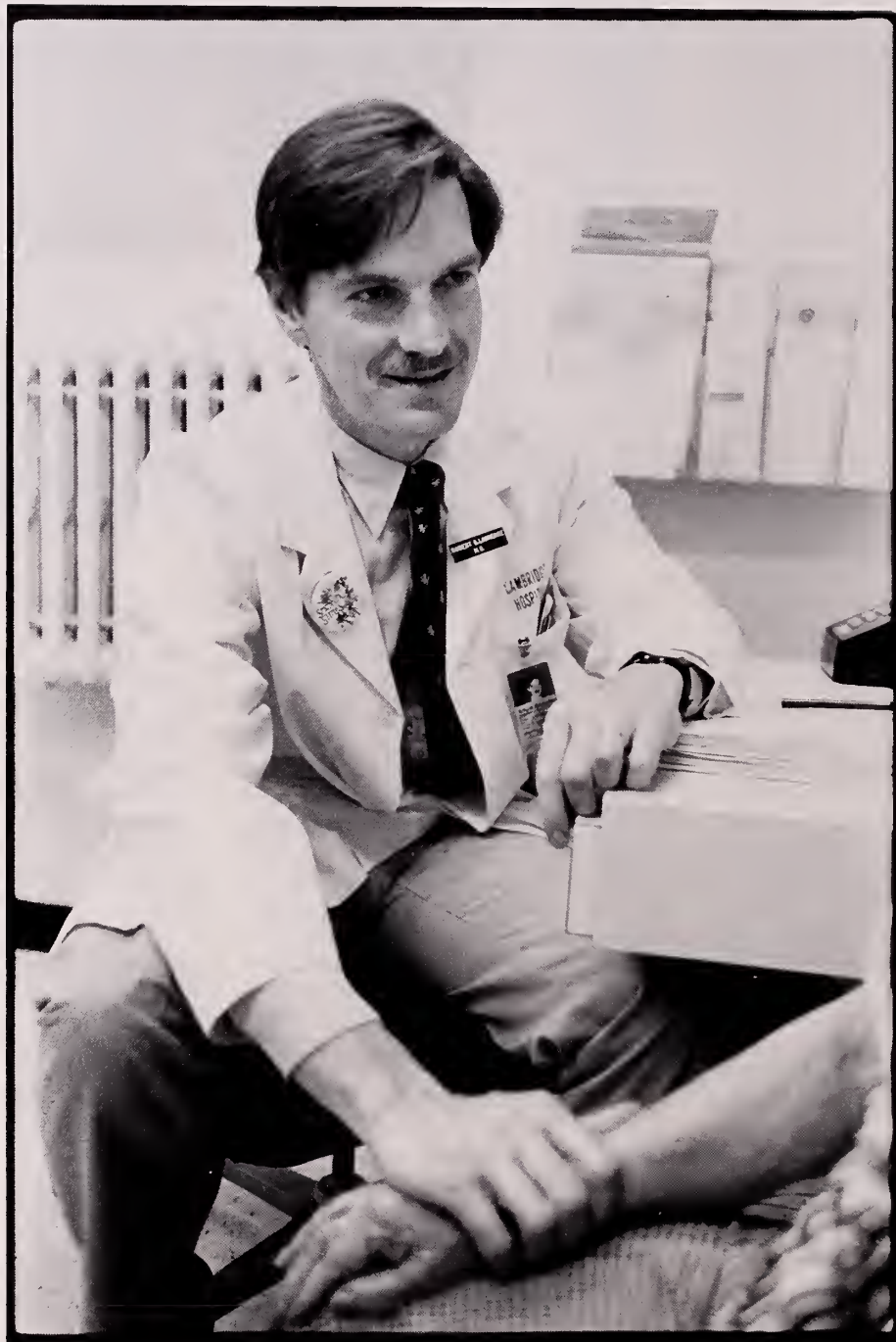
I will never forget the universal kindness and generosity of the Chinese, from the doctors who took time to see me; to the family in Shanghai that twice fed me dinner; to the policemen who gently reproved me for riding my bicycle the wrong way; to the doctor's son in Beijing who took off from work to show me the Great Wall, Imperial Palace, and other attractions; to the numerous people who fed me on trains and made sure I got off at the right stop; to the

peasants and farmers who insisted on inviting me into their homes for tea and food when they could hardly feed themselves; to the Tibetan Buddhist monks who allowed me into their morning prayer ceremony; to the merchant who gave me a ride on his camel; to the businessman who took me for a tour of the Li Jiang river on a bamboo raft.

When I returned to Hong Kong, I realized I no longer viewed China as a homogenous country of subdued and bitter people, where communism means terrorism. Instead, I saw how far the Communist regime has brought it in 34 years. More important, I was more *aware* of China: its difficulties, struggles, and successes; its position in world politics and the state of its society.

To date, I'm convinced that the decision to leave medical school for a year was the most intelligent I've made. I've learned more in this short time than in any other. Although I'm not sure that the experience will make me a better physician, it will certainly be valuable personally.

As I write this article, bathed in the tropical sun of Koh Samui, an island 30 miles off the coast of Thailand, I think about the HMS students now trudging through the cold air of Boston to the classrooms and hospitals. I wonder how many of them feel the way I did before I left, and hope that this article may convince them to do the same. □



# A Decade of Primary Care

by Robert S. Lawrence

Primary care at Harvard? That's a contradiction in terms." That and other less flattering comments about my judgment greeted my decision to return to Harvard Medical School in 1974 to direct the fledgling Primary Care Program funded by the Robert Wood Johnson Foundation. My friends and colleagues in North Carolina, where I was working in community, family, and general medicine, voiced skepticism that still lurked in my own mind. The factors that had influenced my decision to leave Boston after completing my training at Massachusetts General Hospital had not changed: eastern Massachusetts had one of the highest physician/patient ratios in the U.S., North Carolina one of the lowest; the mission of HMS and its teaching hospitals was to advance science and specialty medicine; the community to be served was often immodestly defined as the nation and the world rather than Roxbury or West Newton; and the members of the faculty concerned about primary care seemed to number only a handful.

Skepticism almost became cynicism after my first visit to discuss the position I was being offered. It seemed that the directorship of the Harvard Primary Care Program was a creation of the Robert Wood Johnson Foundation. When the RWJF burst on the national scene in 1973 as the second largest U.S. philanthropy and its board announced that the foundation would focus on improving personal health services, there were many converts to primary care and community medicine across the land. Faculty members trying to improve training in primary care suddenly found interest and support from their chiefs and deans. Within months three Harvard affiliates submitted proposals to the RWJF; and, as the story goes, within days the RWJF informed them that no money would be given unless the activities were coordinated. It seemed that the foundation was determined to treat HMS and its teaching hospitals as though we were a single medical center!

Joe Dorsey '64, then medical director of Harvard Community Health Plan and one of the few bona fide primary care internists on the faculty, chaired the planning committee that prepared a single grant request to the RWJF. Members of the faculty

from several hospitals and HCHP worked together, got to know each other, and forged bonds of common purpose which continue to sustain primary care at Harvard today.

While the grant was being written, modest pilot projects were initiated. Beth Israel and Brigham and Women's hospitals each assigned two residents for ambulatory training at HCHP's Kenmore Center. MGH implemented a new residency track with half of the internship devoted to ambulatory training in the medical outpatient department. One of the two pilot interns, Allan Goroll '73, helped design the new program. For MGH this represented a reaffirmation of the impor-

*The Division of Primary Care has grown from a handful of faculty to over 60 individuals located in most of the affiliated institutions of the Harvard Medical Center.*

tance of ambulatory training, which had begun as early as the 1870s but in recent years had diminished to a few hours per week of the house officer's time.

In the spring of 1974 the RWJF funded residency training in primary care internal medicine at BIH, BWH, MGH, and HCHP; a pediatric primary care track at Children's; and a central office reporting to the dean at HMS. The challenge and the opportunity finally proved irresistible, and I accepted Dean Ebert's invitation to coordinate the effort.

The initial award supplied three years of funding for the central office but only one year for the hospitals and residents. My first task was to negotiate with the foundation an extension of residency support and an expansion to include Cambridge and Mt. Auburn hospitals and the Cambridge Center of HCHP. At the same time Charles Hatem '66, Matthew Budd '60, and I applied for funds

from the Association of American Medical Colleges to plan the curriculum for the Cambridge Center, a project described by Hatem elsewhere in this issue.

Ultimately the RWJF gave us generous support for six years, allowing the program to grow from 11 residents and a like number of faculty to 90 residents at five hospitals and 11 ambulatory training sites.

The enactment in 1976 of the Federal Health Professions Educational Assistance Act (PL 94-484) made additional funds available. The five primary care medicine residencies at Harvard competed successfully for initial awards. These grants continue to the present, but several are in the "phase down to self-sufficiency" trajectory of most federal programs. With the public perception that we have moved from physician shortage to physician surplus, the days of federal support for primary care training appear numbered.

The need for well-trained primary care physicians persists, but the factors influencing specialty choice no longer include a lack of training opportunities in primary care. Although modified over the years by experience and shifting service needs of the sponsoring institutions, the primary care residencies at Harvard appear to be secure fixtures. Last year 225,000 patients made over 1.1 million visits to the teaching practices used by the Harvard Primary Care Program. Over 150 primary care internists staff these practices. Despite the public image of tertiary care at the "medical centers," the dominant mode of practice is the delivery of primary care services by a staff physician or primary care resident in the context of a continuing relationship with the patient.

Sadly, the initial effort at Children's fared less well. The RWJF expected a special track to develop in primary care pediatrics; the Children's faculty wanted all the pediatric house staff to share in the ambulatory experience. Foundation support ended after two years, when these differences could not be reconciled. At the same time, the Family Health Care Program, which had provided outpatient experience for a generation of HMS students, ended for lack of institutional and grant support. My pediatric colleagues argue that

pediatrics—with its historic emphasis on knowing the family, providing continuous care to monitor growth and development, and incorporating the psychologic and social factors in diagnostic and therapeutic decisions—is the quintessence of primary care. Unfortunately, the federal program regulations mirror the earlier requirements of the RWJF, and external funding to support primary care pediatrics at Harvard has had too many strings attached for our faculty to buy into it.

The situation for family practice has been even more discouraging. Caught in a Catch-22 conflict between federal funding regulations and certification requirements of the American Academy of Family Physicians, the senior leadership at HMS has opted for primary care internal med-

icine. At the University of North Carolina, I enjoyed joint appointments in medicine and family medicine, and came to know the potential for collaboration between these primary care disciplines. Now, and for the foreseeable future, our students will have to rely on experiences similar to those described by Suzanne Johannet in this issue to explore career possibilities in family medicine.

The primary care residencies, however, have had an important trickle-down effect on student experience at HMS. Other than the Harvard Family Health Care Program, few opportunities existed for medical students to study and experience primary care prior to 1974. Now elective courses are available at each of the participating institutions, and students also regularly encounter

primary care residents as role models while on inpatient medical rotations. The Richard C. Cabot Society, with John Stoeckle as master, was established in 1979 as an intellectual forum for students and faculty interested in primary care, and to provide validation within the institution for career choices in family medicine, primary care internal medicine, or pediatrics.

As the residency programs grew, the need for additional faculty became more pressing. As described in this issue by Thomas Delbanco, support from the Henry Kaiser Family Foundation to the Division of Primary Care and the Division on Aging stimulated the development of a two-year fellowship program in primary care and general internal medicine. The program provides research training in clinical epidemiology, continued

## Definitions of Primary Care

What is primary care? What does it include, and how does it differ from other specialties?

The first attempt at answering these deceptively simple questions was made 65 years ago in Great Britain, when the term "primary care" was coined. In 1919, Lord Dawson of Penn chaired the Consultative Council on Medical and Allied Services established under the Ministry of Health Act. His committee, charged with developing a new health system that would allocate personnel and resources appropriate to the needs of the population, reported:

We begin with the home, and the services, preventive and curative, which revolve around it, viz., those of the doctor, dentist, pharmacist, nurse, midwife, and health visitor. These we style domiciliary services, and they constitute the periphery of the scheme, the remainder of which is mainly institutional in character.

A Health Centre is an institution wherein are brought together various services, preventive and curative, as to form one organization.

Health Centres may be either Primary or Secondary, the former denoting a more simple, and the latter a more specialized service.

The domiciliary services of a given district would be based on a Primary Health Center—an institution equipped for services of curative and preventive medicine to be conducted by the general practitioners of that district, in conjunction with an efficient nursing service and with the aid of visiting consultants and specialists. Primary Health Centres would vary in their size and complexity according to local needs, and as to their situation in town or country, but they would for the most part be staffed by the general practitioners of their district, the patients retaining the services of their own doctors.

Dawson further described Secondary Health Centres as facilities where "cases of difficulty, or cases requiring special treatment, would be referred from the Primary Centres, whether the latter were situated in the town itself or in the country round." In turn, the Secondary Centres would be brought into relationship with a teaching hospital having a medical school.

Lord Dawson recognized the importance of education at the Primary Health Centre, which he felt should:

be the home of the health organization and of the intellectual life of the

doctors of that unit. Those doctors, instead of being isolated as now from each other, would be brought together and in contact with consultants and specialists.... No doubt discussions and post-graduate instruction would in time be organised, and 'study leave' to teaching hospitals could easily and advantageously be arranged.

Finally, Lord Dawson noted that research should be promoted by this new organization of health services:

the scheme of services which we suggest would facilitate inquiry to the causes of disease and the possible remedies. The facts which indicated the need for such inquiry might, we think, often be brought together in the first instance by the medical practitioners in a given locality. There are great and important opportunities for research in preventive medicine, which at present are scarcely dealt with by any organisation, and mostly are not attempted by any individuals.

A more recent definition of primary care occupies an entire chapter of a May 1978 study, *A Manpower Policy for Primary Health Care*, by the Institute of Medicine's Division of Health Manpower and Resources Development. That definition, arrived at after the committee considered 38 definitions used by various groups and individuals, is excerpted here:

opportunities for primary care practice, and instruction in teaching techniques that prepare fellows for faculty responsibilities.

In 1976, on the recommendation of Dean Ebert, the faculty created the Division of Primary Care, giving it responsibility for the coordination of activities of the Primary Care Program across department and hospital lines. With core support from the dean's office, and guided by a policy board composed of department heads in medicine, pediatrics, psychiatry, and obstetrics, the division has grown from a handful of faculty to over 60 individuals located in most of the affiliated institutions of the Harvard Medical Center.

The challenges facing primary care activities at HMS are still considerable. Residents and students are

influenced away from their interest and commitment to primary care by the inequities of reimbursement systems, the demands of practice, the fear of having to know too much about too many fields, and the lack, outside of HMOs like HCHP, of firm organizational support for primary care practice. Faculty members find that good teaching and dedicated, competent patient care may be less rewarded academically, and that descriptive research and program development usually have less currency. Finally, the economic forces pressing on our institutions make it progressively more difficult to protect the time required to practice and to teach effective primary care.

The movement seems poised to enter a new period of change and challenge. Public reform again pushes

for recognition of the generalist functions of the doctor, for economic equity, and for continued guarantees of patient access with assurances of cost controls. Professional reform presses for more recognition of faculty working in the field. At the same time, diminishing resources promise conflict in the allocation of future money for out-of-hospital care. And yet, the vigorous programs developed at Harvard during the past 10 years form a solid base for continued development in the decade ahead. □

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Primary care is distinguished from other levels of personal health services by the scope, character, and integration of the services provided. The five attributes essential to the practice of good primary care are accessibility, comprehensiveness, coordination, continuity, and accountability.

Accessibility refers to the responsibility of the provider team to assist the patient to overcome temporal, spatial, economic, and psychologic barriers to health care.

Comprehensiveness refers to the willingness and ability of the primary care team to handle the great majority of the health problems arising in the population it serves. A primary care practitioner may limit practice to an age group (pediatrics, internal medicine) or to one sex (obstetrics and gynecology). However, he or she should handle most of the problems arising in the served population.

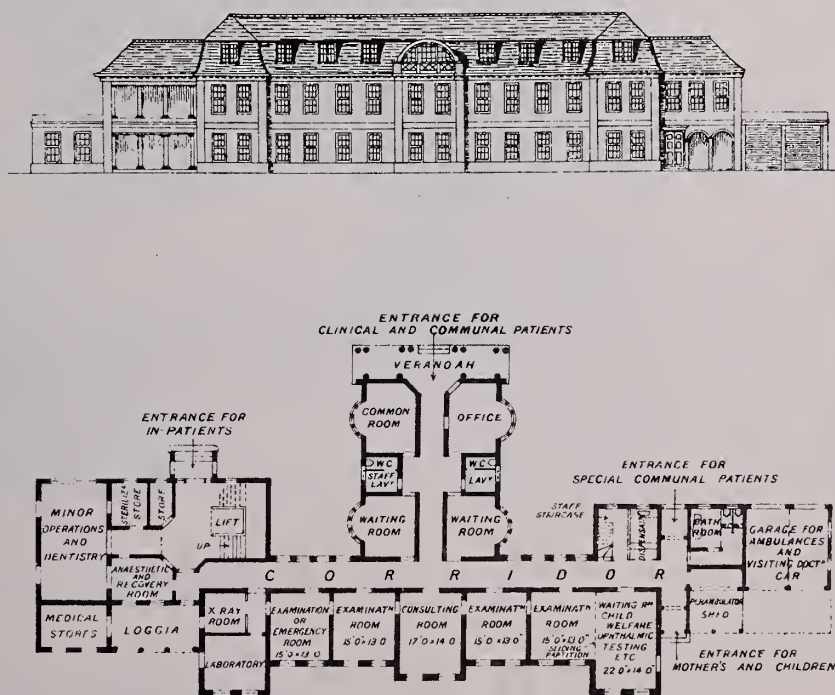
The primary care practitioner coordinates the patient's care, including that care provided by other specialists. The practitioner is the ombudsman for patient contacts with other providers, referring patients to appropriate specialists, providing pertinent information to and seeking opinions from these specialists, and explaining diagnosis and treatment to patients.

Referral of patients to others for services that should be within the scope of the primary care unit promotes discontinuous and fragmented care. Failure of the primary care practitioner to seek results from referral sources and

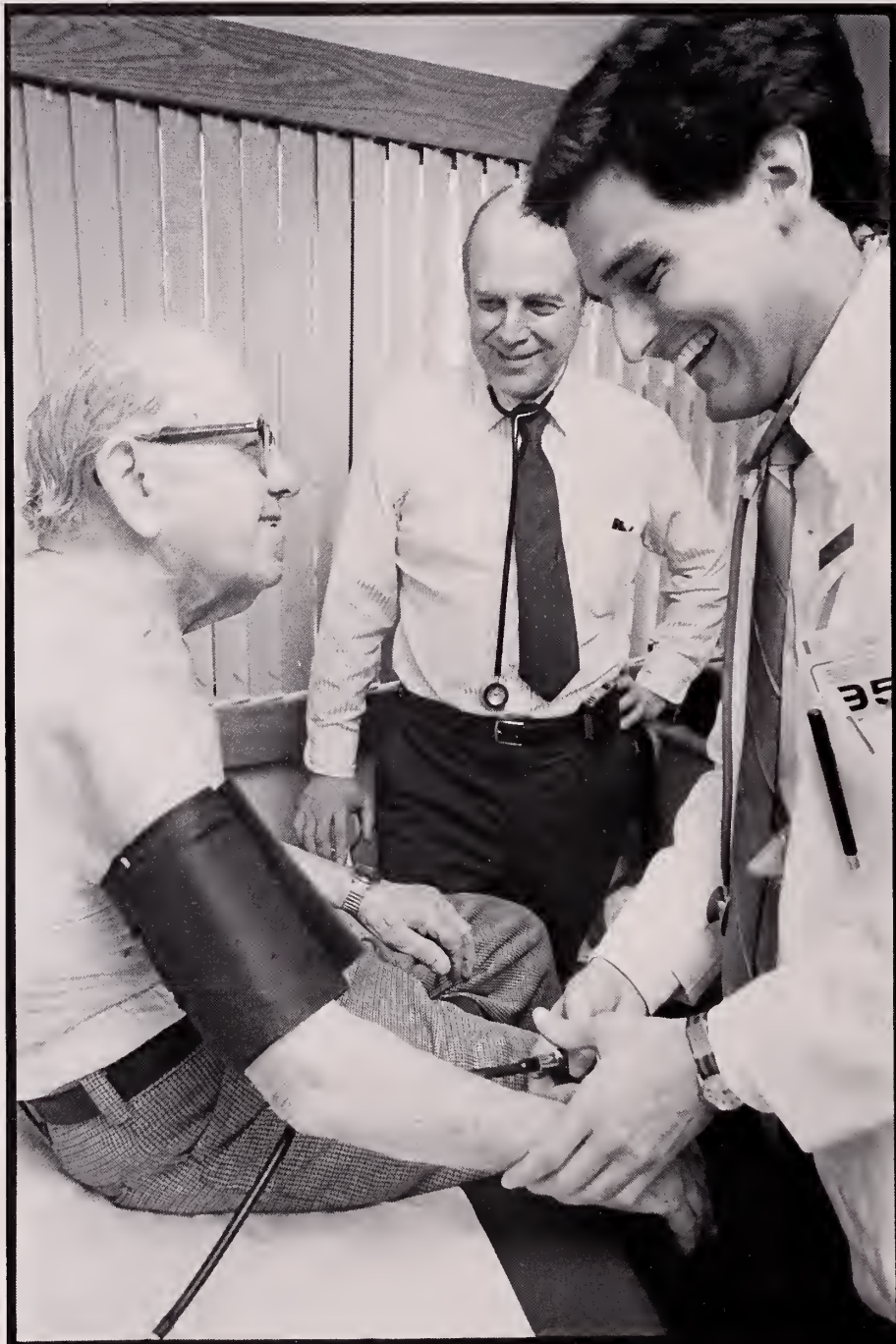
to incorporate this information into the patient's record or failure to accommodate and adapt to the patients' preferences also destroys continuity.

Accountability is an attribute not unique to primary care, but essential to it. The primary care unit should

review regularly both the process and the outcomes of its care. Reviews should lead to education activities to correct deficiencies and expand skills and services. All members of the staff should be included. □



*Floor plans for Lord Dawson's ideal health center.*



# New Directions for the Generalist

by John Stoeckle

PHOTOGRAPH BY JERRY BERNDT

**A**s residency training programs in primary care are celebrated, is there a future for primary care practice? Some hopeful signs and directions are in sight.

Hospitals are the new allies of primary care. They need admissions, and primary care practices have the patients. Thus hospitals are searching to organize, or to contract with, solo offices, groups, HMOs, PPOs, health centers, or corporate dispensary chains. These new intra- or inter-institutional practice connections promise more predictable referrals for hospital admission than the idiosyncratic referrals from individual practitioners.

Yet this is an old scenario. Hospitals built their outpatient departments in the 19th century not only to treat the "sick poor" and educate medical students but also to bring in patients for admission to their beds, then often empty, far more than today. Twenty patients in a clinic session meant one hospital admission.

In this era of competition and regulated medical use, however, the status of care in the community and at the hospital has different implications, particularly for the newer academic medical centers that were developed as referral centers during the enormous hospital expansion that followed World War II.

Familiar modern elements include an excess of acute hospital beds; a diffusion of specialists from teaching centers to modernized community hospitals now doing the same procedures as the center; and a diminished need for surgical if not some medical admission as alternative diagnostic and treatment technologies (such as radiation therapy and imaging techniques) are developed and then organized for ambulatory practice. By forging links to primary care practices in these times, hospitals are trying to maintain their status quo—keeping their beds full with paying patients. Today it takes many more office visits among many more practitioners to lead to a hospital admission.

At the Harvard teaching hospitals, the assurance of admissions has been one of the rationales for hospital-based ambulatory services for over a century. This self- and public-serving function—often forgotten or unacknowledged—has been recently

rediscovered by hospitals that have primary care practices, and by those that do not as their census declines. Newer academic medical centers, for example, have concentrated on training the doctor in hospital medicine, not on competition with private practice. As a consequence, their smaller OPDs bring in far fewer patients.

Back in 1909, Richard Cabot noted that some 30 percent of Boston's population attended the OPDs in the city. Now, in 1984, internist John Goodson reports to residents, in the introduction to *Primary Care at Harvard: Practice and Postgraduate Training*, that the general medical

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practices of Harvard's teaching hospitals annually treat only 219,027 patients for 587,140 visits. Today these numbers and the patient census at the other hospital-based practices are not big enough to maintain full bed occupancy, hence the search by the institutions for alliances with other sources of patients.

The public is also looking for primary care, but for other reasons than those of the hospitals. Yet the search remains elusive for many. Some 38,000,000 persons are reported to have no health insurance of any kind; even among the insured many do not have a primary source of medical aid. More of the public is also looking for prepaid forms of primary care to control their costs, but many of the older, disabled, and poor cannot find a place in such practices. Moreover, except for the HMO and community-based health center, few treatment organizations have a central position for the primary care practitioner.

Other forms of practice may move in this direction if federal programs and insurance schemes insist the practitioner be the "gatekeeper" to the use of the system, whether for referrals or use of expensive technologies.

As practices related to hospitals expand, the numbers of patients without their own doctors will decrease. New arrangements will necessarily develop between staff and residents for the hospital care of patients on teaching services. Teaching and research outside the hospital, currently out of the mainstream, will increasingly yield its own rewards and status.

Given these circumstances, is "keeping the beds full" a big enough hospital/medical school mission, even in the bottom-line technology of this competition era, or can the hospital join the public in new missions for primary care—missions that would be ends in themselves? Might not hospitals actually give up or redefine some beds but shift in new directions—such as out-of-hospital services for the prevention of disease and disability and the optimal maintenance of the numerous handicapped? If the demand for hospital beds diminishes, can hospitals differentiate in new directions?

Hospitals might organize more primary care practices that mix both the able and disadvantaged groups, experimenting in turn with prepaid modes of financing for more diverse groups than the healthy employed who now make up current enrollments of prepaid plans. Such practices would be new experiences for students, trainees, and staff.

Conducting research in these new practices—not only about the use of appropriate diagnostic and treatment technologies, but also about the most effective forms of patient and staff education and about the perspectives of patients seeking medical help—would contribute to the hospital's tradition of improving treatment, learning, and the personal care of the patient. Moreover, such new enterprises promise to be more labor-intensive, and to provide useful medical work for all those new practitioners graduating from medical school. What better hope! □

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# A Course of One's Own

by Suzanne Johannet

In the summer between my junior and senior years of college, I worked with a family doctor in the small town of Richmond, on the Kennebec River in Sagadahoc County, Maine, to decide whether I wanted to become a doctor. I was an English major with a growing interest in rural medicine. My experiences that summer convinced me that I wanted a career in family medicine. That conviction has sustained me through a year of completing my premed requirements, and through these last four years here at HMS, as I have struggled to put together my own family practice curriculum.

Known in the 1880s for its shipbuilding, and as the ice-cutting capital of the world, Richmond has fallen on hard times. A shoe factory provides employment for some; others commute south to the Bath Iron Works or north to the state capital, Augusta. In the 1950s, a group of Byelo (White) Russians immigrated from Yugoslavia. They and their families now make up about 10 percent of the town's population. The onion dome of the orthodox church provides a unique incongruity to an otherwise typical poor small Maine town.

The Richmond Area Health Center is a modern building just up the hill from the Russian church. It was built in 1977, in answer to the nearing retirement of the town's one general practitioner. Rural Health Initiative grants helped to equip and staff it. When I arrived in 1978, the center was headed by a residency-trained family physician, Peter Mason, and staffed by a physician's assistant, an LPN, and a receptionist.

My role in the health center was part medical assistant and part observer. I learned some basic skills, including taking vital signs and rudimentary histories, and assisting with minor office procedures. I also watched while Mason saw patients; accompanied him on house calls, hospital rounds, and weekend emergency office visits; and watched my first delivery. My main focus, however, was on the interactions between the family doctor and his patients. I returned to college that fall determined to become a family doctor, and wrote my senior thesis on doctor/patient communication.

The American Academy of Family Physicians defines family practice as follows:

comprehensive medical care with particular emphasis on the family unit, in which the physician's continuing responsibility for health care is not limited by the patient's age or sex nor by a particular organ system or disease entity. . . . The family physician is educated and trained to develop and bring to bear in practice unique attitudes and skills which qualify him or her to provide continuing, comprehensive health maintenance and medical care to the entire family regardless of sex, age, or type of problem, be it biological, behavioral, or social. This physician serves as the patient's or family's advocate in all health-related matters, including the appropriate use of consultants and community resources.

It was much later that I read these definitions, after I had seen them in practice in Maine. I was impressed that summer by the richness of the doctor/patient relationship as it

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evolved in many different contexts. The same person could be seen once as a mother bringing in a sick child, another day as a healthy pregnant woman in for a prenatal checkup, and yet again accompanying an elderly parent to the office. Knowing her in so many ways inevitably enhanced the care we could give to her and her family.

I was also impressed that summer by the variety of problems. The day's schedule always included a mixture of pediatrics, obstetrics, and adult medicine, with occasional minor office procedures. Our focus shifted from health maintenance to care of chronic conditions to treatment of acute problems and accidents.

The local population grasped the principles of family practice intuitively, using the health center for all its needs. We were the first stop for patients no matter what their problem, from lacerations and fractures to GI bleeds and MIs. Just as the family doctor had a broad view of the patient, the patients saw the physician also as friend, counselor, and community member.

I'll never forget the woman who sat up all night with chest pains because she didn't want to bother Dr. Mason, and then walked into the center in the middle of her first MI. We stabilized her and sent her to the CCU 20 miles away. Another woman called late one afternoon to ask for counseling because her marriage was in crisis. "I need to talk to my doctor. I need to talk to a friend," she kept saying.

When I came to HMS in the fall of 1980, I was aware that Harvard had no department of family medicine, and knew I was unlikely to find much support for my plans. I was prepared to find an institution devoted to research and tertiary care without much commitment to primary care in general or family practice in particular. There would be time to learn the special principles and practice of family medicine during my residency. In the meantime, I wanted the best education I could get near my hometown of Cambridge and close to my doctor friends in Maine.

Over the past four years, I've selected courses relevant to my interests, and occasionally looked outside the school for experiences I felt I needed. First year, I wanted a regularly scheduled exposure to family medicine. In the absence of such a course, I spent as many weekends as I could in Maine, on hospital rounds and seeing emergencies at the health center with Dr. Mason. It was crucial, during that year of the lecture hall and laboratory, to get away, to see real patients, to renew my commitment to my goals—and to return to an atmosphere of support for the field, to see how much the patients valued it, how well it worked, and how much Mason's colleagues respected his knowledge and skills.

It was on one of these weekends that I went out on a medical examiner call with Dr. Mason. An elderly priest had died in bed. We found the body sitting up, his thumb marking his

place in the Bible he'd been reading when he died. As Mason worked, we talked about the impact of seeing a dead body, and about the meaning of death. When I started gross anatomy a few weeks later, I was glad I had had the chance to encounter death in another context, with someone who knew me well and with whom I could talk easily, before I saw the cadaver on the dissecting table.

I used some of my elective time first year to explore health economics. I had worked closely with Medicaid families in southern Maine the previous year, showing them how to obtain preventive care for their children. I felt I had seen the delivery system from the perspective of the underprivileged consumer; now I was interested in the perspectives of the planners and providers.

The remainder of my first year was more than filled by basic science courses. My early exposure to clinical medicine both helped and hindered my studies. I had a pretty good idea of what I needed to learn and what was superfluous to my interests. Having watched physical exams, I studied anatomy hard, to learn the relations of organs, vessels, and nerves. But I was not content to memorize biochemical pathways when my interest was people: I wanted to know how the material related to patients.

In the summer between my first and second years, I returned to Richmond. I had won a grant to join an ongoing project with Maine's rural elderly. My job was to research and write educational materials in medical aspects of geriatrics for nurses and social workers working with rural elderly. In my spare time I went on house and emergency calls, and assisted at my first delivery. This work enhanced my understanding of the practical aspects of rural health-care delivery and of the medical care of the elderly. It gave added relevance to the health economics course I had taken in my first year and to the multidisciplinary geriatrics course I took as a second-year student. Without practical clinical experiences, these courses would have had far less meaning; knowing the import of the issues in practice added impetus for studying them in the classroom.

In my second year, I discovered another way my Maine experiences provided me with a concrete advan-

tage. I found I could easily memorize any aspect of pathophysiology I could relate to patients I already knew. The woman whose MI history I'd taken that first summer in Maine exactly fit Dr. DeSanctis's description of chest pain. I have since found, as most medical students discover when they reach clinical medicine, that I always learn best in the context of real patients.

In planning my clerkships during the clinical years, I wanted to achieve a balance between the tertiary care medicine I could study at HMS and the primary care medicine I would be practicing in the future. I saw

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medical school both as an opportunity to see rare and complicated diseases and as a chance to learn the basics.

In pediatrics, I chose a clerkship at a small community hospital instead of one of the tertiary care centers. During the month I became familiar with common childhood conditions such as asthma, croup, and otitis media. Instead of learning all the manifestations of a single, rare disease in a single child, I learned to recognize how a few diseases look in many children of different ages. Many of our admissions were for so-called "social" reasons: child abuse and neglect. My experience with the complications and intricacies of common and crucial problems was far more important to me than seeing more unusual diseases.

One of my pediatric patients was a tiny baby who had been born prematurely and had spent some weeks in an

intensive care nursery, where he'd had most of the serious complications of prematurity. After he'd stabilized, he was sent to our hospital to grow. I learned about respiratory distress syndrome and necrotizing enterocolitis from the books and his chart. What I gained from being at the community hospital instead of in the intensive care nursery was the chance to see what happened after all the crises. Mine was the experience of continuity, as I checked him daily for weight gain and adjusted his feeding according to the needs of his tiny gut. To avoid awakening him unnecessarily (because he did his growing while sleeping), I timed my visits to coincide with his feeding, and often stayed on after my examination to feed him myself. One of the tragedies of his life was that his non-English speaking parents, intimidated probably by his medical problems, rarely visited him in the hospital.

Another useful course selection was a primary care medicine course. When I first came to HMS I had avoided the primary care program because whenever I mentioned my interest in family practice I was told, "Oh, you mean primary care." What I meant was taking care of families, and I did not see that going on at HMS. However, in my clinical years I discovered that the teachers in the primary care program and I shared an approach to patient care—although they did not focus on family-oriented care, as I did.

I worked with doctors who chose to provide long-term and comprehensive care. Theirs was a fairly sick patient population, and many of the visits were follow-ups after discharge from the hospital. Having been on the discharging end as a third-year clerk, wondering what would happen to these people after they went home, I was glad to be in the position of helping patients put themselves back together after a hospitalization. This was continuing care of whole patients, and I found it far more satisfying than admitting, clearing up, and discharging congestive heart failure.

It was also helpful to see the decision-making that went into admitting patients: the attempts to keep them at home, arranging close contact during an illness, knowing when it was time to bring them in. These judgments are part of the art of medicine. They can't be learned without caring for patients over time.

My knowledge about family prac-

tice and my continued contact with people in the field, both in practice and in academics, have served as armor to protect me from the negative attitude toward the field at HMS. I have been sorry to need a suit of armor, because it has kept me from sharing my enthusiasm. But having my plans so consistently met with disapproval and even derision has taught me to keep to myself, to share less, and to look forward to a time and place where I can pursue my goals in an atmosphere of support and respect.

As I became more knowledgeable about medicine, I had many questions about the interactions of family doctor and specialist, community hospital and tertiary care center. My teachers, lacking an understanding of the role of the family doctor and the realities of medical practice away from academic centers, were unable to answer these questions.

I recently heard an obstetrician tell a group of family doctors at a CME course that no baby should be delivered in a hospital without anesthesia and neonatology in the house around the clock. That recommendation ignores the realities of medical practice in this country, where small hospitals without that kind of backup do exist, and where babies are safely delivered.

I was consistently struck on the wards of the tertiary care hospitals by how much easier things would have been for everybody involved if there had been family physicians around. Too often what was really needed was not more expensive testing but a thorough knowledge of a patient's history. Often, the reassurance of an ongoing relationship with an involved, caring physician could have taken the place of medical interventions. And how much unhappiness would have been spared if there had been someone involved with the whole family to talk to them in times of crisis. I watched diagnostic work-ups in awe, as I thought of the time, money, and suffering that could have been spared.

In my elective time, I took the usual specialties I felt I needed and some unusual specialties I knew I could study only as a medical student at a place like HMS: I spent a demanding and intriguing month studying alcoholism at Cambridge Hospital, and an informative month studying child development at Children's Hospital.

Knowing that I was not in a community that supported family practice, I

was pleasantly surprised through the years to find individuals who appreciated my commitment: a research scientist first year, my resident in pediatrics, coronary care nurses, and members of the administrative staff. With these people I would share my plans and enthusiasm.

While I had been prepared for the lack of support, I did not expect the active discouragement I received from some. From surgeon to internist, most of my teachers have discouraged my interest in family practice. Their attitude is based largely on ignorance. I have heard the same misinformation over and over again, from Attendings,

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residents, and eventually from my own classmates. First is the notion that the field is not intellectually challenging because any "interesting" patient must be referred to a specialist. In fact, family doctors independently treat 95 percent of the problems brought to them. They treat another four percent jointly with a consultant who may actually see the patient or may simply serve as a source of information to the family doctor. The remaining one percent are referred for their care to specialists. The family doctor, however, remains involved as coordinator of care and advocate to patient and family.

The criticism I heard most often was that a family physician can't know enough medicine, pediatrics, and obstetrics to provide really good care. This attitude is most prevalent among specialists, who forget that most patients seen in a family medicine practice have the more common illnesses, that it is possible to know the common

diseases, and that information about the rarer ones is easily accessible from books and colleagues.

Had I not seen how family practice actually works, these arguments might have influenced me as much as they have several of my classmates. I would have no reason to doubt my teachers, who were giving the best advice they could. No one is expected to decide whether he or she is interested in surgery as a career without having first experienced it, yet we were all expected to make a decision about family practice without direct exposure to it.

While telling me what family practice couldn't be, my teachers left out what it can be. There is the continual learning and expanding of one's capabilities in response to the wide variety of problems. Then there is the satisfaction of being able to meet so many of one's patients' needs oneself, rather than having to refer problems because they occur outside of one's limited training, in the wrong organ system. Finally, there is the reward of knowing and caring for families over time, which allows a deepening and broadening of the doctor/patient relationship.

For me, the real satisfaction of my medical school experience has come not at HMS but at my family medicine residency interviews this past fall. There, finally, was recognition of my interests and goals—and praise for having maintained those interests in the face of so much discouragement. In fact, applicants from HMS are typically seen as somewhat special, not because they are smarter or better prepared, but because it is well known that they have had to struggle for their interest in the field.

I have done everything I can think of to make it easier for students coming after me, because I don't think maintaining an interest in family medicine at HMS need be so difficult. I have started a program of preceptorships for first- and second-year students so they, too, can get a taste of family practice firsthand during their preclinical years (see page 28). I hope the program will in some way mimic the experiences I had in Maine, and will help others to sustain an interest in what I consider to be medicine's most interesting, challenging, and satisfying field.

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*Suzanne Johannet '84 will be interning at Duke University Medical Center in family practice.*

# Pilot Preceptorships

Feeling that her early and continued exposure to family practice provided "invaluable support" in maintaining her commitment to the field during her years at HMS, Suzanne Johannet determined to make similar experiences available to others. Working with Patricia McArdle of the Department of Social Medicine and Health Policy, she wrote 200 alumni this past fall to ask if they would be willing to take students into their family practices for a week or more.

Johannet prefaced her request with a brief description of her own first observation of family practice. "From that rewarding experience came a thorough understanding of family medicine, both in its principles and in its practice," she wrote. Because she felt that such "early, positive exposure . . . seems to be crucial to maintaining interest in the field," she chose to concentrate on preceptorships for first- and second-year students. Being inexperienced in clinical medicine, these students, she hoped, would focus on the "behavioral and philosophical aspects of the practice."

Fifty-two alumni have written back to applaud her effort. Of these, 33 have agreed to act as preceptors. The rest have either retired, moved to another specialty, or are in positions not conducive to training students.

A few were moved to tell the story of their own first exposure to family practice. Hugh M. Taylor '78 wrote: "During the summer after my first year at HMS, I was fortunate enough to take part in a course offered by the Department of Preventive and Social Medicine. My brief exposure to the practice of a primary care internist in Dedham opened my eyes to the realities of practicing in the community, and without doubt changed the direction of my career. I would very much like to provide a similar experience to current students at Harvard."

"It is unfortunate that opportunities for introduction to family

medicine no longer exist at HMS," wrote John M. Tudor Jr. '64. "When I was a student, Robert Haggerty, later chairman of pediatrics at Rochester, ran a family health center for fellows (post-residency) near Children's Medical Center. Junior students took care of a family for a whole year as an elective."

The new preceptorships now exist as a pilot program coordinated by Pat McArdle. "Before asking for formal recognition of this type of preceptorship by HMS," Johannet and McArdle explain, "we feel it wisest to demonstrate that interested alumni and students can be brought together for short-term, worthwhile experiences."

Thus far, Johannet and McArdle have held two informational meetings with students, many of whom have expressed interest in the program and have looked through the list of available preceptors for interests and schedules that coincide with their own. Half a dozen preceptorships have already been arranged, and more are in planning stages.

A sampling of responses from alumni to Johannet's letter:

*I thoroughly agree with you that lack of exposure to what family practice is all about in the first two years of medical school allows the ivory tower people, who are mostly specialists, to steer students into the specialties.*

—J.I. Frederick Reppun '39

*I would be very eager to do anything I could to encourage or rekindle an interest in family practice.*

—Calvin S. Bruce '75

*I am extremely interested in this program and have supported such a program for over 20 years. . . . I am delighted that someone at Harvard has finally decided a short preceptorship might be worthwhile and might give students a different perspective. Yes, I would accept*

*students into my practice for a week or more and also will support such a program in any way possible.*

—George R. Smith Jr. '53

*I have served as a family practice preceptor for Harvard students since 1975. I am primarily motivated because I feel Harvard students should have a chance to see that family practice is fun and intellectually challenging. I am delighted to once again open my practice as a preceptorship.*

—Karl L. Singer '67

*I certainly remember from my own days at HMS the difficulty in maintaining commitment to family practice during medical school and would be happy to help provide a preceptorship for students who are interested in family medicine in our kind of setting.*

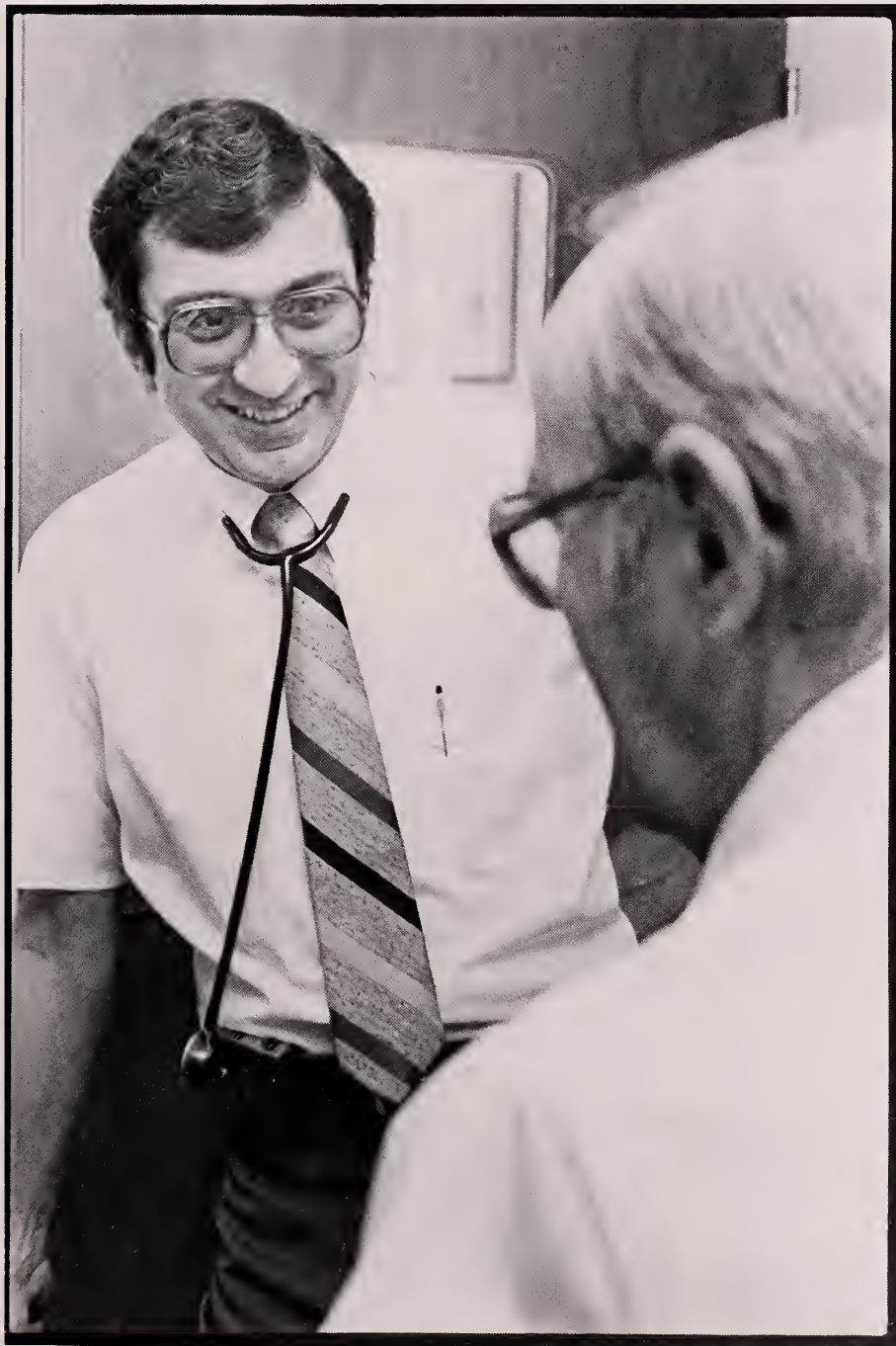
—Rachel Wheeler '77

*I would agree that early exposure to the philosophy and principles of family medicine can be helpful for first- and second-year medical students.*

—Jay R. Poliner '76

*I was very excited to hear of your project to put first- and second-year HMS students in family practice offices for short preceptorships. I wholeheartedly agree with your rationale and am more than willing to participate. I also found Harvard an inhospitable place for family practice and felt at the time that there was essentially no support for it, even after deciding firmly to go into the field. At the time there was also essentially no help available from the faculty in evaluating or even hearing about good residencies—that all took place by word of mouth from the previous class. I think I started medical school wanting to do family practice but I didn't know what to call it until third year. I think the lack of discussion of this as a legitimate option in the preclinical years aided my ignorance.*

—Patricia T. Glowa '77



# Ruminations on Andragogy\*

by Charles J. Hatem

Everything has been thought of before," Goethe suggested, "but the problem is to think of it again." We claim we don't want to reinvent the wheel but attempt to do so regularly. What follows is a borrowed, albeit modified, philosophy of education that has found expression within the training and education of primary care residents and related medical education endeavors.

The imperative for the clinical educator would seem clear enough, but Walsh McDermott's formulation of the challenge ("Education and General Medical Care," *Annals of Internal Medicine*, 4/82) is particularly provocative:

Most of the time when we need a physician, we do not need a very good physician. The need for a very good physician usually comes only rarely, or perhaps never, in someone's lifetime. But its coming is unpredictable; it can come at any time for any one of us. And when it comes, if the right physician is not there, or if it is not seen in time that he or she should be there, the results can be disastrous.

Who is McDermott's "very good physician"? What are his/her characteristics? How must medical education be structured to lead to this degree of "goodness"? Should a primary care physician be able to recognize a malignant melanoma? Read a KUB? Uncover angina? Manage diabetes mellitus in the outpatient? Diagnose an ectopic pregnancy? Appreciate the distinctions between disease and illness?

Prior to the 1975 expansion of the Harvard Primary Care Program to include Cambridge and Mt. Auburn

hospitals and the Cambridge Center of the Harvard Community Health plan, we (Bob Lawrence, Matthew Budd '60 at HCHP, and I) had already begun work on a curriculum development strategy. Sponsored by the American Association of Medical Colleges, we defined, as specifically as possible, our educational objec-

*At the heart  
of competency-based  
training is the  
insistence that one  
master specific skills  
and knowledge  
before moving on.*

tives for primary care physicians in the HMO setting. In December 1975, the Cambridge "axis" of the Harvard Primary Care Program published the resulting curriculum. Subsequently, in June 1978, Cambridge and Mt. Auburn hospitals published an expanded version, supported by the National Fund for Medical Education.

We have tried to answer three fundamental questions: What should the physician (medical student/house officer) be able to do? How should the curriculum be structured to allow achievement of these goals? And, how will we know when the goals have been achieved?

The first question asks us to be explicit in our educational intentions. The second demands attention not just to schedules, but to the principles of andragogy: how adults learn best. The last asks for evaluation methods that provide timely "on-line" feedback, as well as summative evaluation at the end of the period of instruction.

We chose to design a curriculum based on explicit educational objectives. Ideally such objectives, according to educator Robert Mager, must reflect clear intent, identify the conditions under which the learner's doing will be judged, and make clear the degree of proficiency expected. We identified objectives for perti-

nent history taking and examination skills; specific skills in the clinical area; symptoms; diseases; "must recognize" items, whether common or not (treatable/life-threatening if missed); and important therapeutic principles.

We applied this template to 22 clinical disciplines. The resultant objectives form the central core of the curriculum. We kept in mind that educational objectives are not immutable, and should be periodically updated and modified to meet local needs and beliefs. Overly detailed objectives are intimidating and likely to end up on the shelf: properly designed and used, they are the key elements in a successful program.

Objectives are not a cookbook approach to education, but serve to identify the minimal competencies expected. At the heart of the concept of competency-based training is the insistence that one master the identified skills, knowledge, and attitudes in a given area as the basis for moving on. For many medical educators, unfortunately, the whole notion of using objectives is foreign. Many feel that a curriculum-by-objectives is not relevant to what they teach, that their subject matter cannot be so dissected. Nonetheless, even if this approach is rejected outright, there is still the need to be explicit about what one is teaching, what is expected, and about evaluation—in whatever terms the designer prefers. Objectives are nothing more than clear statements of educational purpose upon which rational methods for accomplishment and evaluation schema are based—in a manner analogous to the approach of the basic scientist or of the clinician.

A common error in curriculum design discussions is to focus on matters of methods. Here such tools as new audiovisual aids, some quite sophisticated, are offered as educational ends, as solutions, without reflection on what they are intended to serve. Perhaps an even more important issue methodologically is that of adult learning, a matter almost totally neglected in the designing of medical education programs at nearly every level.

"Adults have a deep need to be self-directing," writes educator Malcolm Knowles in *The Adult Learner: A Neglected Species*; "therefore, the role of the teacher is to engage in a

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\*"Andragogy" is not yet a word that appears in any dictionary," writes Malcolm Knowles in *The Adult Learner*, "But apparently its time is coming." In a three-page history of the concept, Knowles traces the use of the term from its coining by a German grammar school teacher in 1833 to the present. "There is growing evidence," he writes, "that the use of andragogical theory is making a difference in the way programs of adult education are being organized and operated, in the way teachers of adults are being trained, and in the way adults are being helped to learn. . . . The field of adult education has long sought a glue to bind its diverse institutions, clientelles, and activities into some sense of unity; perhaps andragogy will give it at least a unifying theory."

process of mutual inquiry with them rather than to transmit his or her knowledge to them and then evaluate their conformity to it. . . . Individual differences among people increase with age; therefore, adult education must make optimal provision for differences in style, time, place and pace of learning." It is not hard to see that medical educational programs predicated on just these two observations would be radically different than what is now the norm.

Though we are considering each curriculum design element separately, objectives, methods, and evaluation have an intimate, cybernetic association with one another rivaling the best of hormonal feedback loops. Evaluation—as opposed to “being examined,” which often only tests the ability to recall random fact—seeks to find out whether or not identified objectives/competencies have been achieved.

The point is to measure the individual against a standard, not on a grading curve. Educator McGahie, in an essay for the World Health Organization (“Competency-Based Curriculum Development in Medical Education”), put it this way: “Competence is not a matter of comparison with what others do; it is by definition either achieved or not achieved.” Here again, our current system has no easy method for assimilating a competency-based educational philosophy.

Roughly a decade ago, Western Reserve University president John Millis began a talk about the objectives of residency training by immediately putting his “deep prejudices” before the audience: one was that training and education are not the same. Training connotes the establishment of a habit by teaching or discipline. In contrast, education speaks to the development and cultivation of the mental and moral faculties or the expansion and strengthening of the mind. These are more than semantic distinctions. Training can be made more efficient and effective using a well-defined curriculum, but training needs change—and educational programs must mirror that change.

There is not one single set of objectives, however well-conceived and constructed, that identifies the only “true” curriculum. There is no single universally adaptable defini-

tion of competence in medicine, as that definition must reflect local needs and resources. The chief value of extant curricula, of which ours is but one example, is that they can stimulate others to use and modify them for their needs, without too much in the way of reinventing wheels. In this regard we have been gratified at the

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widespread interest in our 1978 primary care curriculum, a 300-page volume we’ve made available at cost to over 500 other primary care programs throughout the country.

Among the most successful applications of our work outside the residency program has been the expression of our educational philosophy in a series of clinical teaching seminars directed at Kaiser fellows (see Tom Delbanco piece in this issue). This series examines in depth, and prepares the fellows for, the role of the clinical Visit, focusing on behavioral objectives and evaluation strategies. The work involves a combination of case-method discussion and actual Visit experiences, in tandem with a senior clinician, at Cambridge Hospital. Sessions are videotaped and critiqued with the use of criteria defined by the fellows, faculty, and guidelines from the literature. Beyond the Kaiser program, the case method discussions and investigation of the “structure and function” of the clinical Visit have been incorporated into the annual Principles and Practice of Internal Medicine course sponsored by the Division of Primary Care. This course, offered through HMS’s Department of Continuing Education, draws upon a national audience.

At the student level, the primary care curriculum has supplied the Introduction to Clinical Medicine

course in the Cambridge hospitals with specific objectives for training and a checklist for competency-based assessment at the end of the course. This evaluation tool, in turn, has been integrated into the house officers’ program, permitting structured analysis of history taking and physical examination skills.

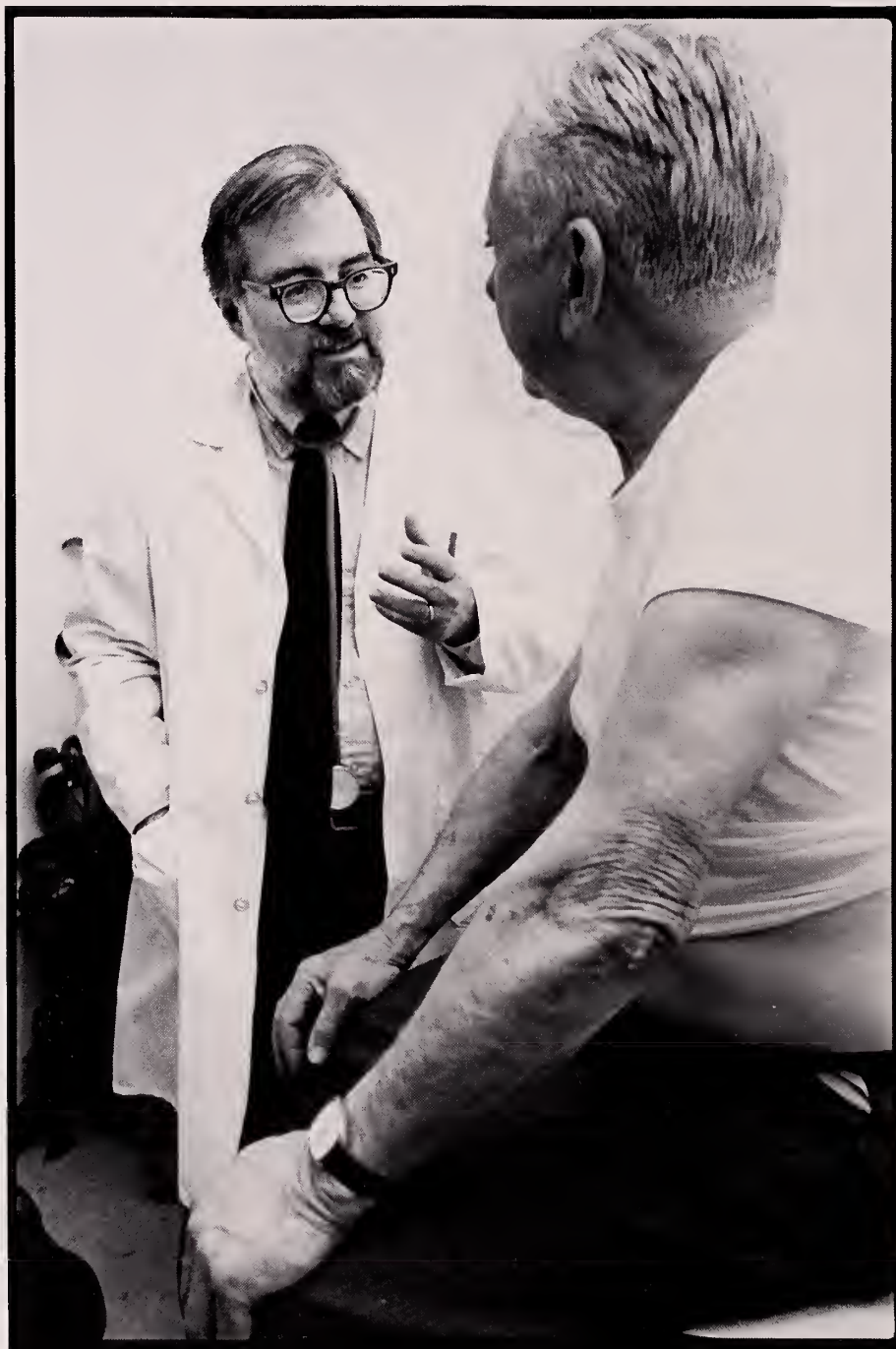
Residents can also use the curriculum in checklist fashion, to identify important training objectives they have not yet met. Also, by breaking the curriculum into elective size modules, we can offer residents an opportunity at the beginning of the rotation to assess their skills and knowledge with a criterion-based exam.

Our “can-not-miss” items—which include many uncommon but treatable conditions that otherwise might be covered only by chance—have attracted particular interest. We have begun to organize structured material to allow the resident to proceed through those items at his or her own pace.

The central challenge in clinical medical education focuses on the emergence of a competent physician without compromising the quality of patient care. Traditional methods for clinical education have centered on giving the individual varying, but progressive, responsibility, while providing varying, but decremental, supervision. For some, competence seems to come in spite of the system rather than because of it.

Clinical medicine is chiefly learned by doing, as indeed it must be (Confucius: “I hear and I forget; I see and I remember; I do and I understand”). This approach, however, lacks the educational rigor that should be demanded of the training of the physician—competency-based training that moves on only when the requisite objectives are met, that instills in the nascent physician a sense of passion for medicine as a lifelong ongoing commitment. This level of excellence is only infrequently demanded by society (the training of airline pilots comes to mind). Our goals in medicine should be no less rigorous; we believe our preliminary efforts are a step in that direction. □

*Charles Hatem '66 is assistant professor of medicine, and associate chief of medicine and director of medical education at Mt. Auburn Hospital.*



# Primary Care as Basic Training?

by William T. Branch

PHOTOGRAPH BY JERRY BERNDT

When we first established a primary care residency at Brigham and Women's Hospital in 1974, we expected to train only a few physicians. Response to the program has been so overwhelming, however, that it has raised an intriguing new question: Should all residents be trained in primary care?

As planned, six residents completed the program during its first four years. Five entered general medical practice: two as academicians in university hospital general medicine programs, two in prepaid group practices, and one in a neighborhood health center. Then something remarkable happened. Perhaps prompted by positive reports from the initial trainees, many more requested to enter the program. The increasing proportion of residents desiring primary care training was up to 20 percent by 1981, 35 percent by 1983, and 50 percent this year.

We accomplished this expansion with minimal dilution of the primary care experience. We decreased the number of months spent in the primary care center from 12 to eight during the two years of residency—which still represents more than 25 percent of total training time, counting the weekly primary care session held during inpatient rotations. In response to an extensive questionnaire we sent out recently, graduates of our program stated that their learning of primary care medicine leveled off between six and seven months of training.

If expansion continues until 70 percent or more of the medical house staff are enrolled, some additional compromises may be needed as our resources are strained. The simplest solution is for some residents to spend a single year (a total of four months) in primary care. Although the briefer exposure may be suboptimal, it could comprise an important experience for some who otherwise would get no concentrated primary care exposure.

During the expansion we have experienced so far, three to four graduates per year have entered general medical practice; the rest have moved on to subspecialties. As other primary care programs have found, the training reinforces rather than changes previously determined career choices. Why then are so many residents eager to enter the primary care residency?

In response to the questionnaire, they almost unanimously answered that they feel it gives them the best possible medical education.

Our program resembles those at the other Harvard-affiliated teaching hospitals. All interns at BWH complete an identical first year of training, during which they spend one afternoon a week in the faculty group primary care practice. Then they are given a choice of enrolling in the primary care or the traditional residency track.

Primary care residents do the same inpatient rotations as those in traditional tracks, but spend four months each year in the primary care center, where they learn general internal medicine by caring for their own patients, and also receive training in office-related specialties, including gynecology, dermatology, and orthopedics. Rigorous teaching conferences reinforce the training and present material related to psychiatry and some nonmedical topics, such as health policy, biostatistics, and medical ethics. Each year two teaching modules are presented in conjunction with Beth Israel Hospital, with topics ranging from health policy and management to new diagnostic techniques in cardiology. Other topics, from medical law and sociology to decision analysis, are covered in conferences held once a month by BWH's Division of General Medicine and Primary Care.

When graduates were asked in the questionnaire what specific features made our program so desirable, the majority cited the opportunity to learn office-related skills in internal medicine. Others listed increased exposure to the various specialties. Quite a few pointed out the intellectual rigor of the program, which emphasizes clinical decision-making, clinical epidemiology, and biostatistics. Many also particularly enjoyed participating in the group practice.

Our experience should have important implications for the training of internists in other programs. We have shown that it is possible to provide an intensive primary care exposure to a large number of residents—training almost all graduates of our program feel is superior to traditional residencies. But is such training really necessary for all medical residents, even those who plan to become subspecialists? It has been

amply documented that subspecialists function as the primary physician for approximately half of their patients. Patients may benefit most from a physician who is qualified and interested in fulfilling their primary care needs, and who also has specialized knowledge to guide them humanely and realistically through the system.

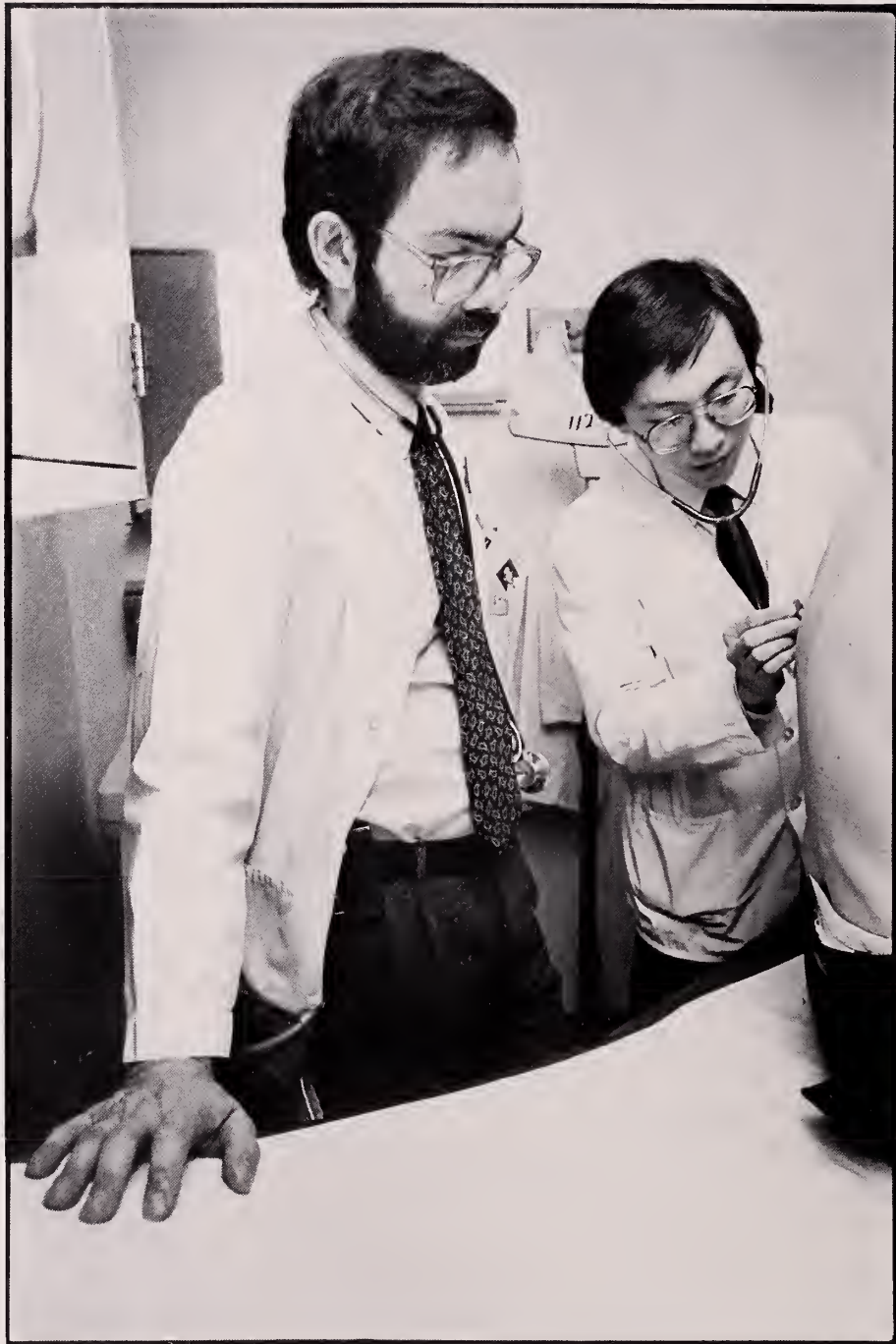
Some important aspects of doctoring are emphasized substantially more in our residency than during blocks of inpatient training. For example, we explicitly teach methods of understanding and coping with patients' emotional and psychological problems. We all know that residents place a very high premium on acquiring factual knowledge. After completing training, however, most physicians become convinced that attitudes and skills are of most importance. Residents are often powerfully influenced by the example set by the faculty. On the questionnaire, many graduates indicated that their interest, concern, and positive regard for patients were enhanced by the example set by their teachers. One graduate, now a cardiologist, wrote:

I cannot overemphasize how important it was to find role models in academic medicine who shared these attitudes. In general, training [at another school] was discouraging. I sought a refuge from that type of influence, and cannot stress enough the respect and gratitude I gained working with [the BWH].

In addition to dealing with patients' emotional needs, we emphasize acquiring knowledge of the natural history of diseases, patient education, and methods for making rational diagnostic and therapeutic decisions, plus a variety of office-related skills ranging from conducting the medical interview to aspirating a joint, injecting a bursa, or performing an examination. Though we remain uncertain as to the best proportion of in- and outpatient experiences during residency, we believe our current program represents a reasonable compromise. We also strongly believe that the intensive, well-organized primary care experience now constitutes an important aspect of general medical education. □

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*William Branch is assistant professor of medicine and associate director for clinical and educational programs, Division of General Internal Medicine and Primary Care, BWH.*



# Catalyzing Faculty Development

by Thomas L. Delbanco

PHOTOGRAPH BY JERRY BERNDT

In the past 10 years, a growing number of departments of medicine at academic health centers have developed divisions of general medicine and primary care. Physicians in these programs have been building hospital-based group practices; curricula, including categorical tracks in medical residencies, to prepare physicians for careers in general medicine and primary care; and research programs. The expansion of these divisions has rapidly outpaced the supply of qualified young faculty. All too often, physicians have been asked to take on faculty responsibilities directly after completing their residencies. Except for the most unusual individuals, they have been poorly equipped to develop research projects and to teach effectively.

To address these needs, in July 1979 Harvard Medical School instituted a two-year fellowship program in general internal medicine for Board-eligible or certified internists. Designed and implemented (by Lee Goldman at Brigham and Women's Hospital, Albert Mulley '74 at Massachusetts General Hospital, and me, at Beth Israel Hospital), with funding from the Henry J. Kaiser Family Foundation given to the Division of Primary Care at HMS, the program increases the visibility of primary care and prepares physicians for faculty positions in general medicine and primary care, and gerontology.

Since influence in academe derives primarily from research productivity, the program places heavy emphasis on providing the tools and guidance necessary for successful research. For the first six months fellows spend three half-days a week together in a highly structured core curriculum addressing the principles of biostatistics, epidemiology, decision theory, and issues in health policy.

The course, offered only to the fellows, is conducted by faculty from HMS and Harvard School of Public Health in conjunction with guests from other universities and governmental agencies. In large part, it follows the case-study method, using research projects conducted by faculty and the fellows themselves. The problems addressed are varied, as might well be expected in a discipline that does not lay claim to any particular part of the body. Seminars are conducted by scholars from a variety of disciplines and subspecialties of

medicine. Discussions cover policy implications, cost effectiveness, and cost-benefit analysis.

Each year, in conjunction with the national meetings of the Society for Research and Education in Primary Care Internal Medicine (SREPCIM) and the American Federation for Clinical Research, the fellows are further exposed to the world of health policy with a day in Washington, DC,

*Expansion has outpaced the supply of qualified faculty in general medicine and primary care. All too often, physicians have been asked to take on faculty responsibility directly after residency.*

meeting with policymakers. In April 1983 they viewed the case of "Baby Doe" from several sides, with Robert Rubin, assistant secretary for planning and evaluation, Department of Health and Human Services; C. Everett Koop, U.S. surgeon general; Senator Durenberger of Minnesota; and the staffs of Senator Packwood of Oregon and the Senate Committee on Finance.

Each fellow practices and teaches in a primary care group practice at one of the participating clinical sites: BIH, BWH, Cambridge Hospital, Harvard Community Health Plan, MGH, and Mt. Auburn Hospital. Those who were residents at Harvard have generally stayed at the same institution in which they trained, continuing to care for patients they first encountered during internship. By the end of the fellowship, several have managed the same patients for five years, a particularly helpful experience for physicians preparing to take ongoing responsibility for a panel of patients.

The "teaching how to teach" segment of our program is the responsibility of David Bor '75, a former fellow and now a general internist at Cambridge Hospital. He and Charles Hatem '66, an internist who directs medical education at Mt. Auburn Hospital, conduct a series of seminars that explore the philosophical and practical issues of clinical teaching. In addition to teaching in the group practices, during the second year each fellow takes responsibility for a month of ward attending in conjunction with a faculty member at Cambridge Hospital. Sessions are videotaped, to help evaluate and improve teaching skills.

The program does not offer an advanced degree; rather it views the successful completion of a research project as the "diploma" that signifies a fellow's preparedness for a junior faculty position.

The 26 men and 11 women who have participated thus far have published numerous studies on wide-ranging subjects. Among them: At BIH fellows have analyzed fever in hospitalized patients; evaluated the predictors of survival after cardiopulmonary resuscitation in the hospital; examined the prevalence and management of alcoholism in patients in the group practice; conducted a double-blind control trial of antibiotics for sore throat; and critically evaluated indications for bacterial culture during routine pelvic examination.

At BWH, fellows have studied whether physician staffing changes the outcome for patients in an intensive care unit; how transient loss of consciousness can best be evaluated, and the outcome; and what factors predict significant aortic stenosis in patients with a systolic murmur.

Fellows at MGH have studied diseases that affect the allocation of resources to medical intensive care; designed computer programs to analyze cost effectiveness of common clinical strategies, such as the use of screening tests to detect colon cancer; and suggested indications for vaccination against viral hepatitis.

At Cambridge Hospital, one study examined changes in free care offered by hospitals at a time of shifting patterns of reimbursement; another analyzed indications for prophylaxis against infective endocarditis.

When the *Bulletin* reported on primary care in 1980, our program

was just under way. Now two graduates of that first class, David Bor and Daniel Singer '74, director of the curriculum, have joined the central faculty of the fellowship program. Thirteen graduates are on the HMS faculty, working at Harvard-affiliated teaching hospitals and in the Division on Aging. Others have joined the faculties of some of the most highly developed and well respected divisions of general medicine and gerontology at other institutions, including Boston and Columbia universities, University of Chicago, University of Pennsylvania, and MIT.

*The program does not offer an advanced degree; rather the successful completion of a research project serves as its "diploma."*

Four participants in the program, Lee Goldman, Albert Mulley, Marc Silverstein, and Daniel Singer '74, have been honored with the five-year Henry J. Kaiser Family Foundation Faculty Scholar in General Internal Medicine Award, which recognizes excellence in general medicine, analogous to the career development awards to outstanding young scientists in the traditional medical subspecialties.

Today, with 18 fellows, the Harvard program is the largest in the country. One of its most unusual features is that, from the start, it has



## Profile of a Fellow

JudyAnn Bigby '78 first heard about Harvard's Henry J. Kaiser Family Foundation Fellowship in General Medicine as a resident at the University of Washington, Seattle. "I had decided against subspecialty training," she recently told the *Bulletin*. "I wanted to be a generalist, and I liked the idea of academic medicine. I knew that if I didn't enter a fellowship program, I'd probably do patient care 100

percent of the time in a neighborhood health clinic or hospital-based outpatient clinic. I might have tried to find a position in which I could do some teaching, but it's getting harder and harder to find an academic job if you don't have research skills."

Bigby and her husband, Michael Bigby '75, moved to Boston in 1981—he to begin a dermatology residency at Brigham and Women's Hospital, she to be a Kaiser fellow. "I found the two years of the fellowship the most exciting in my training," she recalls. "After three years of residency and being on-call frequently, I was grateful to have some time to reflect. The first six months

focused on classroom study. Some of it was what I had expected, like biostatistics and epidemiology. But I was surprised—and now I'm very glad—to be exposed to health policy and medical decision making."

The remainder of the program concentrated less time in the classroom and more on learning to teach and to develop a research project. "In academic medicine, it's assumed that people can teach," Bigby explains. "But, though there are some exceptions, for the most part academic subspecialists don't make very good teachers. The fellowship examined the best ways to teach medical students and residents, and gave us some new skills.

been a cooperative venture between HMS and the sponsoring clinical sites, which provide partial stipend support and research funding for the fellows. Although they scatter after the first six months to their clinical sites and concentrate on investigations, the fellows continue to function as a cohesive group, meeting for weekly seminars, instruction in teaching techniques, and informal sessions with distinguished faculty. As a result, one of the most rewarding aspects of the program has been seeing some of Harvard's institutional barriers break down.

*One of the most rewarding aspects of the program has been seeing some of Harvard's institutional barriers break down.*

It has been equally satisfying to watch the institutions benefit as the fellows provide stimulus to students, residents, and faculty. The fellows' enthusiasm, energy, and creativity have had a startling impact on teaching and research efforts. Their presence makes a difference as general medicine strives to come of age in academe. □

*Thomas Delbanco is associate professor of medicine, and director, Division of General Medicine and Primary Care, Beth Israel Hospital.*



I think it's unique in that respect." Learning both these skills and how to do research, she feels, "helps generalists compete with subspecialists on academic ground."

When the time came to choose a research project, Bigby at first thought of a topic that had arisen during her training. As a resident, she "was frustrated to find that some things were done only because of tradition. For example, patients who presented with dementia were given a work-up that included a CAT scan, an electroencephalogram, a lumbar puncture, and various blood tests. No one seemed to be thinking about why we were doing those tests, what we were looking for."

Because investigation of this subject would take too long to complete, Bigby temporarily shelved it in order to follow up on and take further a study of patients who miss appointments at BWH's Primary Care Center. The resulting article (*JAMA*, 7 October 1983) reported that written or telephoned reminders significantly reduced no-shows, and proved to be cost-effective.

Next, Bigby looked at the medical consequences of missed appointments. Her study, to appear in a forthcoming issue of *Archives of Internal Medicine*, found no adverse effects among no-show patients, who are generally healthy and often feel they didn't really

need the appointment in the first place. Cautioning against generalizing too much from the research, Bigby suggests that physicians discuss the need for a follow-up visit with their patients before automatically scheduling it.

Bigby has remained at BWH as associate attending physician, and will be appointed instructor in medicine in July. She sees patients in the clinic; participates in primary care teaching conferences, post-clinic chart reviews, and rounds; and does research. She is now completing her long-planned investigation of the testing of patients with dementia, and is also looking at emergency admissions.

—Lisa Derman



# Plain Doctoring

During the month of January, Jeffrey Calcagno '87 and Susan Anderson '87 were among the dozen mostly first-year students to take a course called Plain Doctoring. Offered since 1981, through the Department of Social Medicine and Health Policy, this course provides visions of illness and doctors as found in literature. More exciting for the students, it gives them their first patient contact, by sending them on house calls.

These students, who as yet have no clinical training, return from the calls "brimming with things to talk about," according to instructor in medicine and course founder J. Andrew Billings '71. During the seminar sessions, rather than focusing on the course of an illness and its management, students and instructors discuss "patients' neighborhoods and homes, how they dressed and where they slept, how the cooking was handled," Billings writes in a course description. "Much of the discussion centers on subjective aspects of care: what right do I have to hear this patient's story, how does this patient make me feel... what do I enjoy and dislike about being around sick people?"

As a final project, students distill these first hours of stepping into the primary care doctor's role—and that of every physician—into any form they wish. Anderson chose to report on a house call (with names changed to protect patients' privacy); Calcagno was inspired to write a short piece of fiction. Their efforts appear below.

## Face to Face

by Susan E. Anderson '87

As I weaved through the heavy traffic, my stomach twisted. I've always hated driving in the city, but more important, I was very nervous about speaking with Gene Cappello. Gene is 41 and dying of lung cancer. What does one say to a dying man?

Gene lived in a residential neighborhood in Chelsea. The street was broad, lined with large houses and many old cars. Kids were trudging through the snow on their way home from school. The Cappellos lived in the first floor of a large house. Mrs. Cappello's sister, who owned the house, lived upstairs.

Mr. Cappello threw open the door, made sure I was unafraid of the huge mongrel whose barking had heralded my arrival, then ushered me into his house as he apologized for its condition. His house looked much like a student's apartment. The wallpaper was peeling in places and the furniture was sparse. It was, however, clean, large, and warm.

Mr. Cappello has a small wiry body. He talks and moves very quickly. Throughout our talk he chewed gum furiously. He never sat still; he constantly changed his position and moved his hands. When he smiled, which he did often, he would lean forward and raise his eyebrows.

His wife, Marie, a quieter, heavy woman, is deaf in one ear. She sat and talked with us for the first hour, and kept us supplied with coffee and cookies.

Mr. Cappello, with his tremendous energy, worked and played hard most of his life. At the age of 19, he started working as a clothing cutter, a trade he continued until he got sick. Usually he also carried a part-time job. At 24 he married Marie. Three years later their daughter, Mary, was born. Friday nights were Gene's time to bowl and drink with his buddies. He commented on his life then: "We lived for today; if we had money we spent it."

A year before his diagnosis, Gene was laid off from work, which was hard for him both financially and emotionally. As he said, "I worked: that's what I liked to do." He was able to find a new job, but had to quit just a week and a half later due to his cancer. At the same time, Marie came down with pneumonia.

For two weeks, Gene didn't tell anyone about his cancer. When I asked why, he replied, "Well a lot of bad things were going on, and I didn't want to spoil their Christmas." He said he always knew he would get cancer because all his family had died from it. Then he added: "The only thing that got me mad is that they all got it when they were 60. I'm 20 years too early!"

The Cappellos agreed that the only good thing about cancer is that it has brought them closer together, and has spurred them into setting priorities. Later Gene said that the advantage of cancer over other forms of death is that it allows him "the time to express to people the way I feel."

Gene's cancer has made Marie very depressed. She told me, "When I get

up in the morning, I feel rotten. I must get myself going." She used to run away from death: "I had an aunt who I loved very much, but when she was dying I couldn't go see her. But when Gene

*Gene commented, "People are always telling you, 'come on, buddy, you can beat it.' That's not quite right. I got lung cancer. I'm no doctor, but I know the statistics."*

got sick, I couldn't run away. I had to face it." She said that she sees a social worker for her depression, which helps.

Marie left the room when we started to talk of death. Gene said there were three things to deal with: optimism, realism, and pessimism. He commented, "People are always telling you, 'Come on buddy, fight it, you can beat it.' That's optimism, but it's not quite right. I got lung cancer. I'm no doctor, but I know the statistics. Nobody beats lung cancer. I know I'm going to die, unless there's some miracle, which I'm not discounting."

Though not a churchgoer, Gene is religious. His mother prays for him every day, which he thinks might help. He said: "I've also started doing something on my own. I read in the newspaper that vitamins A and C help prevent cancer. So I started taking them. It can't hurt—and who knows, it might help. Also it helps me mentally: I'm doing something. I'm going to do my best not to allow it to get me down," he added. "When you're feeling okay physically, you're feeling mentally okay."

I thought that statement said a lot about Gene. He's an active, physical man with, at this point, few symptoms. Hence he is "mentally okay." I wonder if his attitude will be so upbeat if the tumor pinches off his spinal cord, which is very possible. The paralysis it

would bring on is Gene's greatest fear. "There are ways to kick off and then there are ways to kick off," he said. "Don't let me fool you. I'm not macho. I'm scared as hell."

Ever since his illness was diagnosed, Gene has noticed that many friends and relatives shy away from him. He said, "They get upset. They can't force themselves to call, to talk to me. They don't know what to say. They're just like my wife was; they run away." He said that he feels sorry for these people because "they'll have to deal with it sooner or later. It'll catch up to them. And when they finally do have to deal with it, it'll be much worse. That's what happened to my wife."

I asked Mr. Cappello what was important to him. He sighed, then answered. First, he would like to leave his wife and daughter financially better off, which he knows isn't really possible. He is in what economists call a poverty trap. He would like to work, for the money and to keep himself busy—but he can't afford to, because he would lose Medicaid, welfare, and the advantages of a whole host of other programs.

Gene worries how others, especially his mother and wife, will handle the burden of his death. He said, "I feel I have to be strong so everyone else will be strong." To some extent he feels that he "let 40 years drift by." He told me that "the saying 'youth is wasted on the young' is really true." He wishes he had spent less time playing and more time working and saving. Yet as an afterthought he commented, "If I had saved my money instead of spending it, I'd be spending it now for hospital bills and all that. Now the government's paying for it. That's not so bad. At least I had some good times."

I asked him what made a good doctor. Mr. Cappello replied, "You gotta really want to be a doctor. You can't do it half-assed. You can't screw it up, either. You must give it your all." He also said that a good doctor has to be able to "rap" and listen. He likes all his present doctors; he can rap with them. I asked him, "When I'm a doctor, how should I talk to people who are dying?" He paused and then replied, "You can't talk to everybody the way you talk to me. If you talked to my aunt [who also died of cancer] like this, she would have lost it. You have to listen and rap with people. Deal with them as individuals."

All too soon it was time to go. The Cappellos invited me for dinner; I was sorry I had made prior plans. Gene walked me to the car, gave me directions home, and with a big smile wished me the best of luck. I thanked him and wished him the same. Driving away, I felt happy. His story is tragic, but I wasn't depressed. Gene was right when he said that those who shy away from him are losing out. □

## Flashback

by Jeffrey L. Calcagno '87

My eyes are closed, as they have been for some time now—I'm not sure exactly how long. The percolating sound continues; it's a vaporizer or humidifier, maybe even a respirator. I'm too weak to open my eyes and check. More accurately, I'm too weak to care.

Not a bad position, in many ways, when you get past the tragedy. A 50-year-old doctor with a full head of hair, out skiing the Rockies one day and the next lying sweaty in bed. They don't know how high the fever rose before I entered the ICU. Nor do they have any idea what caused it, which is why my chart must tell the story of a mystery virus. Hit like a nuclear war and with as little logical explanation.

Anyway, I'm out of the ICU. They've demoted me to a lower floor. This isn't so bad, not having to act or respond; being able to babble or not; being too tired and sick and weak to care, so far removed from the man I used to be that I need not be courageous out of pride.

For days or hours—it feels like months—I have waited. To amuse myself in this waiting room of mine, my mind plays a video against my dark, closed lids.... It was years ago and I was young, naive. One of my first house calls—young Harvard doctor fights the technological age by insisting on making house calls. Didn't know that house calls meant you have to take a bus to the house. Nor did I know the house might not be a house but a brick, three-story apartment in Chelsea. Chelsea's across the water from Boston, I found; it's not Cambridge.

I've pressed the button neatly labeled "Piano" and am left to inspect

the porch. My Timex ticks loudly, slowly, as I await a circumspect greeting like that of my prom date's father, or something much worse. I'm almost hoping no one's home.

*It was years ago and I was young, naive—young Harvard doctor fights the technological age by insisting on making house calls.*

Open swings the door. There's Mrs. Piano, who leads me in before I can shake her hand. She's not my patient; she's the caretaker, wife, and now mother of Bert Piano. Mrs. Piano—Margaret, she insists—is mostly what Bert isn't. Roving the kitchen tirelessly, she fusses and prepares, talks and tidies in loops around her wheelchair Bert. She swivels his chair to face me for a moment and then turns his blank stare back to the color television propped on the green kitchen table.

"This is a nice place," I tell her. I'm trying to be positive, and I'm trying to avoid looking at Bert. Everything is green and clean, from plants to appliances. A bumper sticker on the fridge advises: "Smile—You're On Candid Camera." The unblinking lenses are those of Mrs. Piano—eyes that make contact easily and never duck away.

"Tell people you live in Chelsea, they think it's going to be a dump, huh? No, this area's fine," she tells me.

Bert gags. He doesn't like Margaret's attention to stray for a second. "He was like that even before the accident," Margaret says, coquettish smile fixed on Bert.

"What do ya want, Babe?" she yells into his face. "Ya want coffee?! O.K., Babe, I already put some on! Be patient, Babe!"

"The accident?" I ask, remembering my fact-finding mission.

Nineteen years ago. Electrical switch. Thrown across garage. Fractured skull. Subdural hematoma with clotting. Coma. Ten months at the General. Near total paralysis.

"You can pull closer to the table," she offers. "Bert don't mind." I'm nibbling Italian pastries and sipping coffee out of politeness. If I pull any closer to Bert surely I'll feel ill. With Margaret's help he can pour coffee down his throat. By himself he can spit it back up and out through the hole left in his throat from the trach tube.

"They thought maybe he wouldn't of come out of it so well, ya know." Margaret whispers any words having to do with death. "Don't let him fool ya, he knows everything that's goin' on. He's playing dumb."

Bert keeps playing dumb through the next two hours on the stove-top clock, through 50 years of Margaret's life. "'Bronze Bert' the girls down at the beach used to call him. 'Tarzan'—used to do pushups like there's no tomorrow."

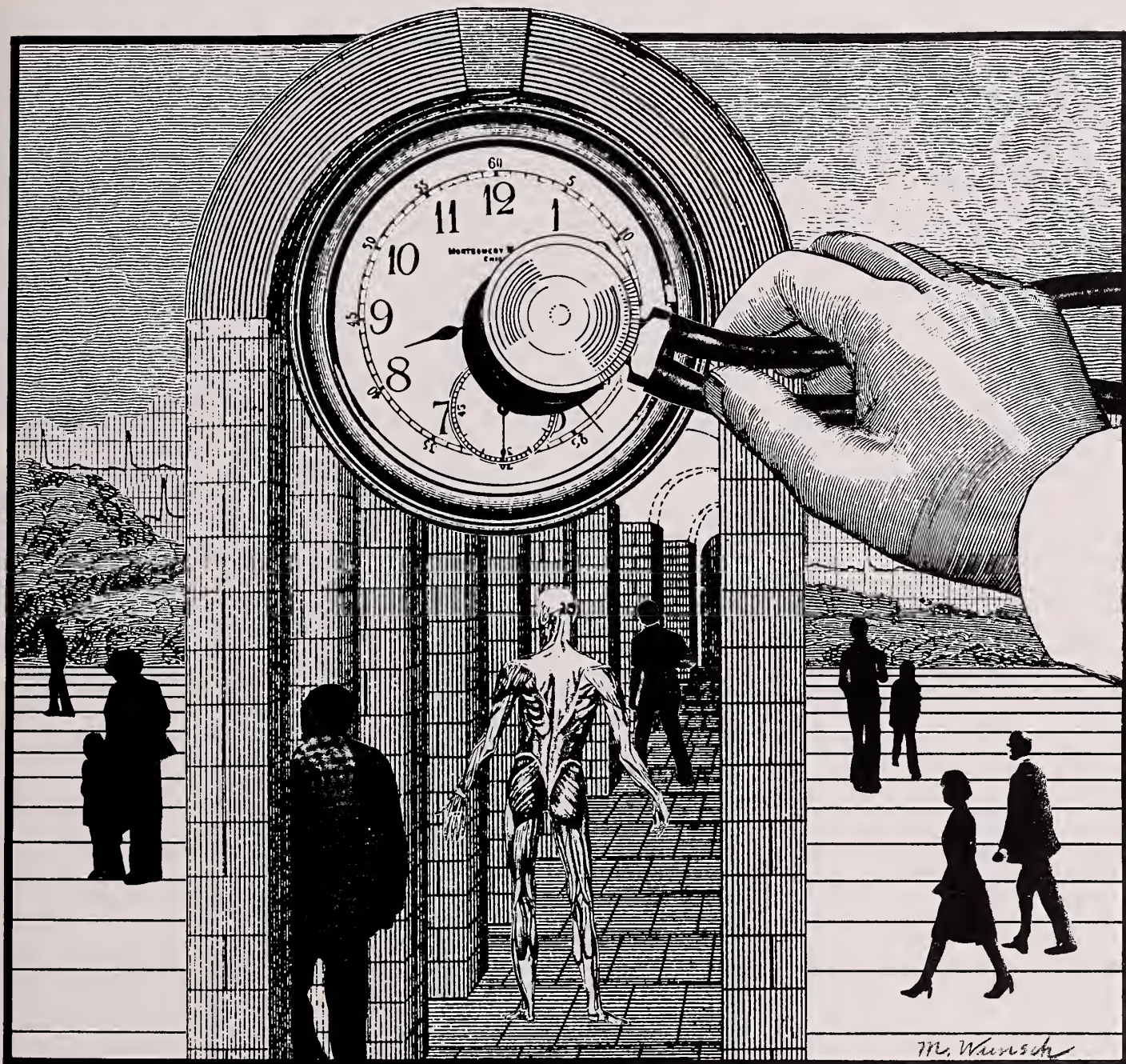
Bert's coughing now, heaving up and down in a tearful laugh. "Ya remember that, don't ya' Bert, how all the girls used to chase ya?"

As Margaret continues her monologue, I daydream of my own tan body, muscles tight from a summer morning lift, strutting the beach. I ask myself which of my bikini-clad beauties I would be willing to nurse for 20 years if she got fat and sick. I'm still asking when Bert spits up more coffee. My stomach turns and rumbles, raising me in search of my tweed overcoat.

"No, Mrs. Piano, I really can't have lunch here. I'm already late for my appointment back at the Beth Israel." She's such a talker I may never get out of here. So I yell goodbye at Bert, who doesn't blink. On the exit I get a handshake from Mrs. Piano and smile my retreat out to the bus stop where I stand in the cold and wait.

I return from my video to hear footsteps. The gurgling of the respirator—or is it vaporizer—seems to change tempo. Soft warm hands, female fingers, grasp and gently turn me in my bed. I want to open my lids and smile at my own Margaret Piano, my own sweet wife who has come and will come each day without fail, until I am whole again.

But the hands are those of a staff nurse. My private practice was wife enough. The doctor who never had time must wait alone. □



# A Generation of Residents: Four Years Later

*"If you're really interested in the primary care program, talk to the residents." Following this sage advice early in 1980, then-assistant editor David Bumke interviewed six residents in several of the Harvard-affiliated teaching hospitals. Those interviews formed an article in the last issue that the Bulletin devoted to primary care, "The Generalist in 1980" (April 1980).*

*For our current issue, we've followed up on the generation of residents who trained back then. Four primary care physicians report below on how their training at Harvard-affiliated hospitals has influenced their careers. Elisha H. (Skip) Atkins describes his residency at Cambridge Hospital and his current work at Massachusetts General Hospital's Chelsea Memorial Health Center. Cheryl Warner '79 looks back to her training at Mt. Auburn Hospital and ahead to her career at Harvard Community Health Plan.*

*The other two former residents who wrote for this issue were among the six interviewed in 1980. When Earl Steinberg '78 spoke to the Bulletin four years ago, he was an intern at MGH, unsure how to evaluate the primary care program he was just entering. Concerned about getting as much exposure to inpatient medicine as his peers in a straight medical track, Steinberg nevertheless looked forward to the "specialty" clinics, when he would be "on a very steep part of the learning curve." As he planned, primary care has provided "a setting in which I could both practice medicine and participate in policy making."*

*In 1980, when she was a senior resident at Beth Israel Hospital, Betsy Weiss already anticipated practice in Alaska, hoping to find there a concept of illness "as part of a continuum of health, of life," rather than "as something to be shunned and conquered and squashed." At her clinic at BIH, she particularly enjoyed "that sense of thinking clearly about problems in the context of a patient, a person, whose life you know something about, whose illness fits into a larger context than when you see them in a johnny in a hospital room—where they become a little less than a whole person, and more of an illness." "I have always thought that what I would enjoy about practicing medicine was just that," she said: "practicing medicine."*

# Chelsea

by Elisha H. (Skip) Atkins

**L**ike many others entering medical training about a decade ago, I felt that physicians, while continuing to care for individual patients, should recognize and respond to broader social needs. Many influential friends and teachers were involved in efforts to provide better access to health care for the poor—to give communities and individual patients more information about and control over their care, and to link preventive and curative medicine. Most had some sort of primary care training.

I decided to do a primary care internal medicine residency at Cambridge Hospital, then spent two years working in the Medical Walk-In Unit at Massachusetts General Hospital while earning a degree in occupational medicine from Harvard School of Public Health. Finally ready for a real job, I signed on with MGH's Chelsea Memorial Health Care Center, where I remain.

I tremendously enjoyed my residency at Cambridge Hospital. Serving mostly the working-class population of East Cambridge, the hospital was deeply rooted in community life. It was a place where the emergency-room nurses had grown up with many of the patients, and knew the family problems that were the hidden cause of their dizziness or shortness of breath; where you might live on the same street as a couple of your clinic patients, and stop over to watch the Sox on TV while checking their post-propranolol pulse; where the local teenagers would call the page operator if they saw someone messing with your car, and knock on your door when they got a cut.

Many of the hospital workers and their families were also patients: a cafeteria worker might whisper exuberantly that she was now getting good sex, one year and much grieving after her husband's death of cancer on your ward service. Immersing myself in this social context—learning the details of how people lived, where they worked, what customs and habits they had for coping with sickness and disability—made practice satisfy-

ing, and came to seem indispensable for adequate care.

Middle- and upper-class patients I'd met in medical school had an exaggerated faith in the capacity of medicine to cure them of their ills, but little in doctors, who, through incompetence or at best sloth, were likely to withhold the necessary secrets. The patients at Cambridge, in contrast, loved us "young doctors." They would invite us over for meals, notice when we were tired from being on call, and reassure us when we missed a diagnosis or gave a drug that made them sick. But they also had a resigned and fairly realistic notion about the limitations of medicine. They had been through generations of residents determined to cure their arthritis, control their diabetes, and banish their constipation. They had no illusions about cure: some symptoms were part of life, to be borne, perhaps contained, but not fussed over. They also had no illusions about the ultimate nature of our relationship with them, having seen these same generations of residents leave after training for more genteel places of practice.

The hospital as a whole was an uneasy balance of town and gown, the older practitioners and local-boys-made-good on one side, the Harvard-appointed staff on the other. The Harvard staff was bright, up-to-date, logical, while the medical decisions of some of the local physicians were questionable at best. Yet the patients continued to come to some of these physicians, while we had trouble filling appointment slots in the Primary Care Unit. The reasons weren't mysterious: these doctors were there to stay, and—in contrast to the Harvard doctors, who took long vacations and signed out for nights and weekends—would be there if they got sick.

Patients would also come where they felt at home. Their allegiance in the hospital clinic was not to the doctors but to the older nurses, who had known them through time. The Portuguese patients would go to a crowded neighborhood clinic rather than to the hospital, largely because the secretary and health aide were Portuguese.

Actually, at Cambridge there was some ambivalence about the concept of primary care. There was superb teaching in areas like alcoholism and psychiatry. Residents were given re-

sponsibility for important decisions on their primary care patients (the chief of medicine, a cardiologist, would ask the opinion of a patient's primary care resident before recommending cath), but there were few general internists in positions of authority. A few young ones were good role models in their dedication and empathy, but they didn't seem to have much support in setting up teaching and patient-care programs.

One subspecialist said to me in an unguarded moment, "I don't think primary care is a method that has proven itself yet." Good Lord! As if subspecialty medicine weren't, in fact, the brash new kid on the block! Then and since, primary care in the Harvard system has seemed a bit like a human-rights commission in El Salvador: a struggling enterprise, kept alive by a few visionary leaders, in the shadow of a skeptical authority that tolerates it only as a way to continue the flow of aid from outside.

Because of this skepticism, we're often forced to consider just what it is we can do better than a subspecialist. This task is easier at Chelsea than it was at the MGH clinics or even at Cambridge Hospital. At Chelsea, we have our own turf, a special knowledge of and relationship with our population of mostly elderly Eastern Europeans, Irish, and Italians; and younger Hispanics and Southeast Asians. We've been to their homes, visited their factories, talked with families. Certainly we do lots of diagnosis and treatment, calling on specialists when needed, but we also spend considerable time on the non-specialty tasks of coordination of care and advocacy. The care of patients outside the hospital, especially the poor and elderly, requires frequent phone calls to make sure medicines are understood and tolerated; meetings with visiting nurses, social workers, public health officials; forms, and more forms, for homemakers, commodes, transportation, better housing. If the system is confusing to me (which it is), then it's doubly so to our patients, hampered by rudimentary English, inadequate education, or declining mental function.

Some of our advocacy (or haggling, depending on your point of view) is directed at MGH. For our patients as a group, we try to squeeze out adequate specialty and surgical back-up, continued support of our

emergency room, admitting privileges for our staff. For individual patients, there is continual negotiation with the house staff about disposition and the appropriate intensity of work-up and therapy.

Since we're trying to serve our patients' best interests in the broadest sense, we're not always advocating more services, more public assistance. For a 90-year-old patient with a persistent pneumonia, we may suggest that bronchoscopy be deferred. We may keep patients with industrial injuries out of the compensation morass by encouraging them to return to an appropriate level of work. We will prod alcoholics, drug abusers, and those with risk factors to acknowledge and overcome their denial and inaction.

Yet I can't imagine a primary care physician suggesting, as Joseph Stokes III did recently in a *New England Journal of Medicine* Sounding Board, that smokers, hypertensives, hyperlipidemics, and alcoholics pay disproportionate health-insurance premiums, even a large chunk of hospitalization fees, if they present with their risk-factor papers out of order. This approach (which interestingly didn't suggest higher premiums for those undergoing the risks of international travel, downhill skiing, or private airplane flying) seems part of an increasingly moralistic and punitive approach which ignores the contribution of social class, genetics, education, and corporate policy in the etiology and correction of health risks. I'd prefer to see us remain patients' allies and friendly critics, not health police. Unfortunately, there are occasions when this relationship is tested. Whose ally are we when we do a preplacement or life insurance physical, or a disability determination?

The kind of practice I'm in can be aggravating and tiring, leading to lots of staff turnover. I was surprised to find a number of amenities at Chelsea to prevent this problem: a fund for continuing education, short sabbaticals for research, an elder-affairs coordinator. The fiscal footing is sound, so pay is adequate and generally on time.

Most important, we're encouraged to develop areas of special interest, rather than being required to do unceasing patient-care sessions. One member of our group has passed his boards in geriatrics and developed a

home-care program; another lectures widely on pain control in the terminally ill; a third has published on the problem of elder abuse; another has worked on teaching programs for physicians in the diagnosis and treatment of alcoholism. My area of interest is occupational medicine. I'm able to do site visits and work on screening and health-promotion programs.

This kind of job is very satisfying. I'm forced to admit it couldn't have existed before changes such as Medicare and Medicaid, and the involvement of academic hospitals in primary care. Every day, though, I'm reminded of how far we still have to go toward a goal of personal, comprehensive, community-based health care available without financial barriers, combining the continuity of care given by traditional practitioners with modern scientific standards. On a typical morning I might see a waitress with angina who has no health insurance, in tears because she can't afford both her medical bills and her rent; a Haitian summarily taken off SSI (Supplemental Security Income) for unclear reasons; and an elderly patient reproachful that I hadn't seen her during her recent surgical admission, of which no one had informed me.

I pass the franchised urgicenters when I go for a hamburger. These seem pretty threatening, as do continued cuts in public support of health care for the poor and elderly. Ultimately, primary care physicians will have to become involved in another level of advocacy, arguing for support of the type of care we believe in, and against a turn to a fragmented, episodic, commercialized, two-class system. □

## Alaska

by Elizabeth T. Weiss

My husband, David Clement, and I left Boston in the summer of 1980, after completing primary care internal medicine residencies (at Cambridge and Beth Israel hospitals), to join the public

Health Service in Bethel, Alaska. We had long planned to practice medicine in a rural setting, in a place with solid winters and clear medical needs.

Bethel is a town of 3,500 people in the delta of the Yukon and Kuskokwin rivers. There are no roads, but a jet arrives from Anchorage, 400 miles due east, two or three times a day, weather permitting. Most of the people here are Yupik Eskimo, and about one-third of them speak only Yupik. Traditional subsistence lifestyles are still very much in evidence.

The 55-bed hospital, which cost \$60 million to build, serves 16,000 people living in 48 villages scattered over an area the size of Oregon. There are 14 doctors. David and I split the single internal medicine position. We are responsible for overseeing intensive care internal medicine, and for doing various procedures. The next nearest internist, surgeon, obstetrician, or subspecialist is 400 miles away by air, across two mountain ranges.

There is an enormous amount of disease. We see about 20 cases of active tuberculosis a year. The rate of hemophilus influenza infection is 400 times what it is in the lower 48. Hepatitis B antigen carriers make up about 10 percent of our population, with all the complications of that disease: polyarteritis, glomerulonephritis, hepatomas. We also see a great deal of chronic pulmonary disease, rheumatic heart disease, arthritis—bread-and-butter internal medicine.

The Yupik people were convinced by their colonizers to give up traditional healing with the promise of something better and more powerful. Indeed, great strides have been made in solving the leading health problems in the area. Children no longer die in droves from diarrhea and pneumonia. Tuberculosis, introduced by trappers and explorers, which affected nine out of 10 people in the 1950s, is now contained if not conquered. Even hepatitis B is being controlled with a mass vaccination program.

But solving a medical problem is not the same as a healing interaction with an individual. I have often thought it a little grandiose of Western physicians to consider themselves healers. We are trained as technicians. But whether we assume the role ourselves or are given it by pa-

tients, we expect people to feel better when they leave an encounter with us.

In my four years here, I have become increasingly respectful of the differences in the ways patients experience the workings of their bodies. At times, when I could not explain a symptom, I have wanted to dismiss it as unimportant. But the interaction between body and mind complicates how people experience any symptom, whether it is a painful intercostal muscle which becomes alarming because of anxiety about finding money to pay for oil to heat one's house, or a painless breast lump which can be ignored no longer when the skin around it puckers and dimples.

People come to physicians when vulnerable, and make themselves more so by exposing what hurts them. I think it's rare that they consciously distort what they tell me. It's all too easy to do the reverse, to distort what we tell them.

My abilities as a physical examiner and my skill as a self-educator have greatly improved. One of the most valuable lessons I learned in training is that medical knowledge is dynamic. If one ever masters medicine, it must be by accepting the insignificance of one's knowledge. I guess that's not a new thought, but I keep expecting there to come a time when I don't have to review what I've read six months earlier. Perhaps, as I continue to practice, I will acquire the knowledge base and wisdom I saw in my teachers.

David and I are leaving Bethel at the end of this year to join a private practice in Caribou, Maine—another rural area with good winters, where we can run our team of nine sled dogs. The chronic minor frustrations of government employ have spurred us to overcome our fears of confronting the business of medicine directly in private practice.

We are looking forward to working in a hospital with more services and more depth in specialty staff—though, since Caribou has no regular medical subspecialists, we will continue to have a diverse practice. David and I will again split a single job in order to care for our two small children—a pleasure we have no desire to give up.

I enjoy practice now as much as ever. Though we will certainly miss Bethel in many ways, I expect that enjoyment to continue in Caribou. □

# Baltimore

by Earl Steinberg

The developments in my career over the past three years have been natural outgrowths of the primary care clinical training I received at Massachusetts General Hospital and the strong support MGH and Harvard Medical School provided for my health policy and research interests.

After receiving an M.D. from HMS and a masters in public policy from the Kennedy School, I entered the primary care program with the hope that I would receive broader medical training than that normally provided in the straight medical track. I thought broad experience would prove useful in general internal medicine. Indeed, my extra training in outpatient gynecology, orthopedics, arthritis, and dermatology has been invaluable in my current clinical practice. My original concern that my inpatient residency would suffer as a result of the extra time I spent in the outpatient setting proved unwarranted.

During my junior residency year, I helped set up a well-received weekly conference for primary care residents, which is still running, on topics in ambulatory medicine. We drew heavily on ophthalmologists, otolaryngologists, gynecologists, and other non-internal medicine subspecialists, who provided insight into what internists can and should do with a number of clinical problems, and what subspecialists do after appropriate referrals from us.

During my senior residency, I spent most of my elective time doing research. Together with another primary care resident, I evaluated the experience of MGH's centralized Anticoagulant Therapy Unit in managing over 1,700 patient-years of outpatient oral anticoagulant therapy. I also started a project with the departments of Cardiology and Nuclear Medicine to examine the role exercise thallium testing plays in the diagnostic and therapeutic decisions made by different types of physicians who care for patients with suspected cor-

onary artery disease. I received some very helpful financial support from the MGH Primary Care Research Fund for both projects.

The predictions I made in 1980 ("I can envision myself working in an academic setting where I would spend half of my time doing clinical work and half doing policy, either at a school of public health or someplace like the Kennedy School, or even consulting to the federal government") describe fairly accurately what I am now doing.

In July 1982 I accepted a position at Johns Hopkins, where I have joint faculty appointments in the Division of Internal Medicine at Johns Hopkins Hospital (JHH), and in the Department of Health Policy and Management at the Johns Hopkins School of Hygiene and Public Health (SHPH). I spend about half my time doing clinical work (two half-days per week in a faculty group practice, two months per year attending on the medical consultation service, and two months on the medical wards at South Baltimore General Hospital). The other half I spend doing research in the Office of Medical Practice Evaluation at JHH and the Center for Hospital Finance and Management at SHPH. So far I've concentrated on technology assessment and on the development of analytic methods for implementing and evaluating health-care payment innovations. I am nearing completion of the study I began at MGH on physician use of thallium myocardial scintigraphy, as well as a study of the extent to which liver-spleen scan results influence physicians' management decisions at JHH. In April 1983 I received a grant from the U.S. Congressional Office of Technology Assessment to perform an in-depth clinical, industrial, and policy analysis of nuclear magnetic resonance (NMR) imaging.

At the Center for Hospital Finance and Management I have been studying hospital readmission rates in the Medicare population, trying to develop a methodology for predicting per-patient expenditures in the Medicare population, and working on a severity of illness scale that can be applied to ambulatory patients. I believe the ability to evaluate and compare the disease burden and resource requirements of ambulatory patients will take on added importance as payers and providers increasingly turn their

attention to the outpatient setting.

On the teaching front, I have organized a weekly lecture series at JHH on Topics in Ambulatory Medicine for the medical house staff and faculty, and help teach a course on research methods for our general internal medicine fellows.

Over the next several years I hope to concentrate on my patient care and research activities. I have just received a Henry J. Kaiser Family Foundation Faculty Scholar in General Internal Medicine Award, which will greatly facilitate the pursuit of my goals. I also hope to get more involved in health policy issues at the state or federal level by participating on committees or in study groups formed to address health policy issues of national importance.

I believe a career in academic general internal medicine is not only viable, but also may be easier to support in the future than comparable careers in many subspecialties. □

## Medford

by Cheryl Warner

I entered Harvard Medical School with a background stronger in the humanities than in the sciences. My interest in medicine was shaped, however, by the positive example of a primary care practitioner who was well known to me: my father—corny but true. I knew from the outset that I was a generalist at heart and that I would go into a "patient care" specialty; a primary care residency in internal medicine was a natural choice.

I primarily want to take *care* of patients. This may sound simple, but the more I do it the more I realize how difficult it is. The trick is to find the right balance between management of disease and illness, medical technology and human psychology, and physician and patient responsibility for decision making. Add the ever-growing issues of medical-legal liability and cost containment, and the job continues to grow in com-

plexity. Are we prepared for this task by our residencies?

I was a primary care resident at Mount Auburn Hospital, a lesser-known—and not well-enough known—teaching hospital in the Harvard system. Research and academic medicine are highly valued in medical school, as are hospitals where they are emphasized. Consequently, a community-based hospital, where the focus is on clinical practice, tends to be somewhat devalued. This is unfortunate for those interested in just that: general clinical practice, as we learn mostly by example. There is no question in my mind that a primary care residency provides one with enough exposure to inpatient medicine to become a competent internist. Moreover, the outpatient exposure is helpful if not essential preparation for the practice of general internal medicine. But we should be learning even more, as the issues of cost competition and allocation of limited resources come more to the fore.

While in medical school I became interested in HMOs as alternatives to traditional private practice. HMOs offer prepaid, comprehensive care with an emphasis on prevention and patient education, in other words, health maintenance as well as cost containment. My outpatient work was done at the Cambridge center of Harvard Community Health Plan. My experience there afforded me a good opportunity to learn about the pros and cons of being a physician or patient at HCHP, and at HMOs in general. The net result is positive.

I'd like to make a career at HCHP: there are enough clinical challenges to keep me stimulated, and there are opportunities for teaching nurse practitioners, medical students, and residents, and for involvement in decision-making and management. I have been on staff at HCHP's new Medford center since its opening in July 1982, and am currently an elected representative from the center to the Physicians' Council, a group that advises management and helps determine policy.

Any choice represents a series of compromises: the obvious advantages of being affiliated with a group versus the disadvantages of working for an organization; the difficult balance of family (I am married with a new baby) and career. Somehow, I want to do it all. □

# Navajo Doctors Needed

by William H. Wiese

**I**mmediately adjacent to the Shiprock Indian Health Service (IHS) Hospital on the Navajo reservation in New Mexico stands the Shiprock Community Health Center. An independently operated, Navajo-run facility with the amenities of a community clinic, the center attracts patients away from the IHS hospital, helping to decompress the daily outpatient crush there. The IHS service unit director, who was the first Navajo doctor on the reservation, willingly provides pharmacy, radiology, and laboratory assistance to the clinic, which approaches one of his ideals for the Navajo.

The Shiprock Clinic was founded by an Area Health Education Center (AHEC) created in 1972 by a federal contract through the University of New Mexico. AHEC's goal was to promote development of Indian health professions, particularly among the Navajo. The clinic was to demonstrate a primary care alternative to IHS and serve as a preceptorship site for Indian students training elsewhere.

The lack of Navajo physicians—at the time, there was only one—was glaring for a population estimated at 135,000, covering an area the size of West Virginia. The other health professions were similarly deficient. Then as now, almost all health services on the reservation were dispensed through IHS.

The Indians readily acknowledge

IHS's notable successes. It has offered an array of life-saving services in harsh circumstances where its predecessors had generally foundered. Mortality statistics for Indians have dramatically declined. Maternal and child health statistics are now comparable with, and in some instances are better than, those for white populations in the Southwest. Tuberculosis is close to being under control. Most medical specialty services are available either at IHS hospitals and clinics or through access to hospitals in the surrounding areas.

However, many Indian groups were dissatisfied with their dependent relationship with IHS and with their limited effectiveness within the decision-making process of the federal bureaucracy. They complained that the Anglo IHS physicians were difficult to communicate with, did not understand Indian ways, and in many cases did not remain long on the reservation. They questioned the adequacy of the physicians' training. In other words, the system lacked many of the qualities generally associated with primary care.

These complaints are not unique to IHS. Similar perceptions shroud National Health Service Corps assignees in many non-Indian settings. This situation will worsen with current federal policy seeking to cap the duration of assignment for NHSC providers.

The IHS physicians, as a group,

must be among the most dedicated, conscientious, and idealistic anywhere. Yet inevitably a few have succumbed to disillusionment and cynicism from chronically insufficient funding, high turnover of personnel, the apparent anonymity of their patients, difficulties perceiving long-term benefits of their services, and isolation.

AHEC's organizational plan was to work closely with the Navajo Health Authority (NHA), a tribal entity that had recently been established to address the lack of Indian health professionals. NHA had been hoping to build the American Indian School of Medicine [to give the opportunities and supportive environment to Indian students that Howard and Meharry medical schools had been essential in providing to large numbers of black students.] This dream would go unrealized, due to lack of indigenous resources, geographic dispersion of relevant educational expertise, only lukewarm support from other tribes, and, above all, lack of funding.

Several of AHEC's and NHA's early ideas proved fruitless, such as promoting preceptorships and residencies at IHS and other facilities serving the Navajo. Such opportunities exist and provide outstanding experiences. But for whom? Most medical students and residents are Anglos. Only a small proportion will return to the reservation as practitioners, and they don't particularly



*An NHA-AHEC researcher talks with a woman in her dirt-floored hogan about the lack of sanitation and clean water, and the enormous anxiety she faces over the loss of her land to strip mining. (Photo by Bob Papstein from Pictures of the Navajo, © 1980 Navajo Health Authority).*

address the underlying problem. Even at Shiprock Community Health Center there have been insufficient numbers of Indian students to utilize the clinic's potential. What's more, the clinic has never been able to attract a long-term Indian doctor. Like many IHS facilities, it has had to depend upon a succession of short-term, usually Anglo, physicians.

More successful was our effort to recruit Indians into the health professions, providing financial assistance to the extent possible, moral support, reinforcement, and counseling.

The difficulties faced by Indians who leave their reservations to attend colleges and universities are numerous. Attrition rates are disappointingly high. Prior academic preparation is often only marginal or worse. The social problems on the reservation follow students to school, and are

compounded for many by cultural discontinuity.

Over a six-year period, our support program helped about 200 students from numerous tribes in the Southwest into training in medicine, nursing, public health, and the various allied health fields. Attrition remained a problem, and there was frequent need for remedial work. But of those who graduated and found jobs, nearly 90 percent returned to work on reservations or elsewhere with Indian peoples. We took considerable comfort in these figures as evidence that our goals were being addressed. Still, the numbers remained very low. Fewer than 10 Indians entered medical training each year, and just a few were Navajo.

The federal funding has wound down for the Navajo AHEC, and its various programs have been scattered

to local schools and agencies, or have been terminated. The student support program lost its funding because it was outside the federal AHEC guidelines. We got as far as we did with it only because congressional authorizing language had made note of the exceptional circumstances of the Navajo setting.

The factors limiting the number of Navajo health professionals are not insufficient numbers of preceptorship sites, lack of facilities, unavailability of slots for Indians in existing medical schools, or lack of willingness of current graduates to serve on reservations. Of greater importance are the quality and effectiveness of the primary and secondary education systems available for Indian children and teenagers. Steps directed at these levels are necessary if the primary medical care needs of the Navajo are to be met in the long run by more than just a few Navajo physicians.

We need to work at building a pool of eligible, motivated, and qualified applicants at the pre-professional level. It is no easy task. The payoff will be decades rather than merely years away. And so far it is an investment that few, if any, seem willing to make. □

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